BRIEF GUIDE TO THE PROJECT METHOD

HOSIC-CHASE

A HIGHWAY SHALL BE THERE
NORTHLAND COLLEGE

Northland College Library
No. 371 : H79

PRESENTED BY

3051

BRIEF GUIDE TO THE PROJECT METHOD

By James F. Hosic
Associate Professor of Education
Teachers College, Columbia University
and Sara E. Chase
Principal of the
Kensington Avenue Elementary School
Springfield, Massachusetts

c

Yonkers-on-Hudson, New York
WORLD BOOK COMPANY
2126 Prairie Avenue, Chicago
1926

WORLD BOOK COMPANY

THE HOUSE OF APPLIED KNOWLEDGE

Established 1905 by Caspar W. Hodgson
YONKERS-ON-HUDSON, NEW YORK
2126 PRAIRIE AVENUE, CHICAGO

The first method of learning, among men, was by doing; and learning by doing is the essence of what is now called the project method. The method is old and proved: only the term "project" is new. Within the past few years many books advocating the project method for teaching one subject and another have been issued; and there are theorists who would even have our schools dispense with textbooks. In practice, however, it has been found that textbooks must still be relied on, and it has become obvious enough that some subjects and parts of subjects cannot be taught to advantage by the project method alone. On the other hand, the project is so entirely natural a method of learning that it cannot be dispensed with. Just what, then, shall be made of the project method? Dr. James F. Hosic and Miss Sara E. Chase, the one a theorist in education with wide practical experience, and the other a teacher well grounded in the theories of education, have collaborated to evaluate the project method, to show what should be done with it and what actually has been done with it. The result of their collaboration is *Brief Guide to the Project Method*, a practical and well-balanced book, which World Book Company commends, in a spirit of service, to teachers and all students of education

HCBGPM-3

Copyright 1924 by World Book Company
Copyright in Great Britain
All rights reserved

PRINTED IN U.S.A.

LB
1027
.H5

PREFACE

This little volume is intended to serve as a handbook for teachers. Those who are seeking an exhaustive treatise on the project method dealing at length with controversial points, must look elsewhere. Such a book has its uses, but we have had other ends in view. There is a limit to the amount of abstract theory which workers in the schools, and students preparing to join them, can assimilate and apply. We have tried to keep on the safe side in this respect.

Our main object has been to establish a point of view and to show how teaching may proceed in accordance with it. Long experience has convinced both the authors that the deepest need of teachers generally is the right conception of the job. This need we have tried to meet. Not all will agree, of course, that our contentions are sound. Nevertheless, we have strong faith in them. However imperfectly we may have interpreted the project method, we believe that it is a fruitful concept of living, learning, and teaching, destined to influence profoundly the educational practices of the future, and that for good. Whether it does or not will be determined by the meaning which is attached to it and the good sense and skill with which the idea is put into practice.

The matter is yet in the formative stage. There is much confusion and some doubt in regard to it. In the long run wise counsels will prevail. That our modest effort may help and not hinder this consummation we earnestly hope.

The division of labor which the authors made was as follows: Mr. Hosic prepared the text of Part One and the bibliographies. Except for minor details, the chapters are identical with the articles in a series that appeared in *The Journal of Educational Method* for the school year 1922–1923. Miss Chase supplied the questions and topics for discussion which follow the chapters, prepared the descriptions of the sample projects in Part Two (all of which were carried out under her direction in the Union Street School of Hackensack, New Jersey), and added the hints and helps for teachers which make up Part Three.

James F. Hosic
Sara E. Chase

CONTENTS

PART ONE — THEORY OF THE PROJECT METHOD

CHAPTER PAGE

I. WHAT IS THE PROJECT METHOD? 1

Various uses of the term "Project Method" — Importance of a philosophy of method — What "Project Method" should be taken to mean — Methods or method? — Implications of this interpretation — A point of view, not a technique — Discussion — Selected references

II. EXPERIENCE AND DEMOCRACY 10

An experience — Significance of the sled story: the project as experience — The project as democracy — Living, learning, and teaching — Discussion — Selected references

III. WHY STUDY THE PROJECT METHOD? 17

The value of theory — The influence of concepts in education — Value of the concept of Project Method — Original contributions — Some other values — Discussion — Selected references

IV. THE RÔLE OF THE TEACHER IN THE PROJECT METHOD 26

Living and learning — A method of teaching — The teacher's part — The stages of a project — Situations to seize upon — Discussion

V. THE RÔLE OF THE TEACHER IN THE PROJECT METHOD (*Continued*) 34

The approach — The purposing — The planning — Carrying on the activity — Discussion

VI. THE RÔLE OF THE TEACHER IN THE PROJECT METHOD (*Concluded*) 42

Something different — Organization and retention — Discussion — Selected references

VII. TYPES OF PROJECTS AND THEIR TECHNIQUE . 50

Projects classified — Types of projects and types of learning — Types of teaching — Discussion — Selected references

CHAPTER PAGE
VIII. CRITERIA OF SUCCESS IN PROJECT TEACHING . 62
The nature of the experience — The activities of the pupils — The results obtained — Economy — Discussion — Selected references

IX. POSSIBLE APPLICATIONS OF THE PROJECT IDEA . 74
Successive degrees — Direction of study — Motivation — Subject units — More inclusive enterprises — Discussion — Selected references

X. DANGERS AND DIFFICULTIES 85
The danger of "laissez faire" — As to socializing the recitation — Organization and drill — The course of study — Conclusion — Discussion

PART TWO — SAMPLE PROJECTS

XI. THE SELECTION OF PROJECTS 97
Some ways of selecting worth-while projects

XII. FIRST-GRADE PROJECTS 104
1. Eugene Field for appreciation — 2. Mother Goose's health party — 3. "Safety first" from the sand table

XIII. SECOND-GRADE PROJECTS 122
1. A fruit store — 2. A birthday party — 3. Post cards and letters

XIV. THIRD-GRADE PROJECTS 136
1. Hansel and Gretel — 2. A Post Office

XV. FOURTH-GRADE PROJECTS 151
1. A health poster — 2. A puppet show

XVI. FIFTH-GRADE PROJECTS 163
1. A Trip to South America — 2. Individual progress in spelling and arithmetic (third, fourth, and fifth grades) — 3. Some big questions in geography and history (fifth and sixth grades)

XVII. SIXTH-GRADE PROJECTS 177
1. Geography from current events — 2. A play to show important events in history

CHAPTER PAGE

XVIII. PROJECTS IN SPECIAL CLASSES 185
1. Checkerboards — 2. The Hackensack Bank

XIX. A KINDERGARTEN PROJECT 193
Banks for thrift

XX. PROJECTS BY THE ENTIRE SCHOOL . . . 197
1. Dolls for children in Europe — 2. Tableaux for the Pilgrim tercentenary (first grade to sixth grade)

PART THREE — HINTS AND HELPS FOR PROJECT TEACHERS

XXI. THE TEACHING OF GEOGRAPHY 219
The scope and purpose — Illustrations of the types of projects in geography — Bibliography

XXII. THE TEACHING OF HISTORY 223
The scope and purpose — Illustrations of the types of projects in history — Bibliography

XXIII. THE TOOL SUBJECTS: ARITHMETIC, SPELLING, WRITING, READING (MECHANICS OF) . . 227
Drill for intelligent use of the tool subjects — Scope and purpose — Real reasons for the use of arithmetic — Articles purchased by fourth-grade children during one month — Real reasons for the use of writing and spelling — Bibliography

XXIV. THE TEACHING OF COMPOSITION 234
The scope and purpose — Illustrations of projects in composition — Bibliography

XXV. THE TEACHING OF LITERATURE 237
The scope and purpose — Illustrations of projects in literature — Bibliography

INDEX 241

PART ONE

THEORY OF THE PROJECT METHOD

BRIEF GUIDE TO THE PROJECT METHOD

CHAPTER ONE

WHAT IS THE PROJECT METHOD?

VARIOUS USES OF THE TERM "PROJECT METHOD"

ADVANCE in education depends upon the development of fruitful ideas. Without a standard of reference and the impelling force of an ideal, teaching would become static. Our day has seen a remarkable growth in fruitful ideas; witness the notion that the life of children should be regarded as real life, that provision must be made for individual differences, that there must be greater economy of time in education, that better school buildings should be erected, and that educational opportunity should be equalized. In the field of method have been developed such concepts as apperception, self-activity, interest, how to study, motivation, and problem attack. Recently writers on education have begun to use the term *project*, and finally *Project Method.*

As usual, the latest arrival has created a disturbance. Numerous questions have been raised with regard to it. Is this something new or merely a new name for what good teachers have always done? Is it, after all, really anything more than problem solving? Why call it a method? Why not call it merely a particular kind of unit of subject matter, which varies the organization of class work and adds a new type of assignment to the question, topic, exercise, and the rest?

Why not accept the dictionary definition (one of several) and use the term *project* only when we wish to speak of the children's planning of practical activities? Why, indeed, use the term at all, since it merely serves to create confusion? At any rate, let us avoid the word *method*. Projects, yes; we should use them as a means of teaching — "teaching by projects" — but *method* is too abstract a term. Let us have methods — "specifics" — instead. Thus and much more in the educational press.

Meanwhile the popular magazines for teachers find the Project Method a thing to conjure with. Numberless plans for "projects" appear. The textbook advertiser follows suit. He is sure that his latest publication is the first in its field to embody and exemplify the Project Method. "Buy and be up to date, in the swim, as progressive as they make 'em!" Nor are the expositors wanting. At least five books bearing the name have appeared and others are announced, to say nothing of pamphlets. Everybody's doing it. What attitude should the conscientious teacher take?

IMPORTANCE OF A PHILOSOPHY OF METHOD

The cause is a worthy one. Nothing will do more to organize our educational practices healthfully and to save us from fads and malpractice than a sound philosophy of method, a central unifying conception of the process of education. The project method, properly interpreted, is capable of making a large contribution to that end, for it may easily unite all those factors of learning and teaching which are involved in the *purposeful* experiences of the school. To the extent that desirable changes in human beings may be brought about through the willing and more or less intelligent pursuit of ends, to that extent the Project Method may become an inclusive concept or guiding principle.

WHAT "PROJECT METHOD" SHOULD BE TAKEN TO MEAN

Here is the first of many stumbling blocks for the unthinking or the unwary. The Project Method is first of all *a method of living.* Life itself is full of projects. The moment we face a situation to some degree unwonted, we have the need of making a conscious adjustment; and we do so with more or less of intelligence, more or less of satisfaction or dissatisfaction, and more or less of perception of what we do, why we do it, whether it succeeds or fails, and the reason for this. When I was a boy, I lived on the farm and in the midst of emergencies. On one occasion a hind wheel of the wagon gave way miles from home or the nearest shop. Fortunately the wagon box was empty. We fell back on the Indian method, secured a pole, placed it under the axle, fastened one end under the wagon, permitted the other to drag on the ground, and so proceeded homeward. The difficulty was overcome, and I personally learned to some extent how to meet that emergency as well as any similar one.

A six-year-old boy wished to make a wheelbarrow. He hunted up a small wheel which he had seen in the attic and tried to fasten this to some wooden boxes which were among his playthings. He thought that the wheel was too small for one box but decided that it fitted another very well. He studied his father's wheelbarrow to see how the wheel was placed. He tried one or two similar modes of attachment on his box. The result was somewhat unsatisfactory because he was not skillful with hammer and nails, and because he could not analyze the weakness of his efforts. A wise father discussed the matter of the attachment with him and suggested one or two ways that he might try in order to see if they would result in improvement. The boy followed one of the suggestions and fastened the wheel securely. He nailed two handles to the sides of the box which formed the body of the wheelbarrow; and he was much pleased with the result until he tried to use it for carrying wood and found that the handles were too short.

After considerable search he found a stick that was right in diameter and long enough to make two satisfactory handles. He wished to saw this into two pieces of equal length, but he did not know how to find the middle point. After thirty minutes of concentrated attention and experimentation, he decided that if the stick were a string he could get the middle point. He found a string, cut it to the exact length of the stick, folded it to get the middle, and used this as a measuring tape to find the middle of the stick. In a few moments he had a wheelbarrow which meant so much to him that he wished to take it — not the new bicycle that had been given to him that day — to show to his grandmother who lived a few streets away. That night the boy asked his father how he would have found out where to cut the stick in order to get two equal pieces, and his father showed him the use of a yardstick.

The boy had learned something by the project method. He had a purpose which led him to plan and execute for the realization of that purpose, and he judged his planning and his executing, as you and I do every day, by the satisfaction found in the results.

The term *Project Method* may therefore be properly applied also to *learning.* It is a name for what happens when an individual, or a group, sets about accomplishing a purpose, and in carrying it out brings about changes in his (or their) knowledges, skills, habits, or attitudes. If the undertaking is worthy and the changes are desirable, we call the activity *educative*, in the narrower and better sense of that word. We should recognize, however, the distinction between desirable and undesirable projects. Thieves, for instance, become clever through attempting and carrying out projects, and it is their success which confirms them in their evil occupations.

METHODS OR METHOD?

Projects in life, yes, and even projects in school, but Project Method! That is an educational term and at once raises the question: "What does it mean? The Formal Steps we know, Drill we know, Supervised Study, Socialized Recitation, Inductive Method, Motivation, Thought Question, Laboratory Work, and many more. How will a recitation conducted by this new method differ from the methods we already employ?" Just there lies the difficulty. These so-called "methods" are procedures to be employed; the Project Method is really a principle to be applied. As such, it is more inclusive than any of them, more difficult to grasp, and more far-reaching in its possibilities.

IMPLICATIONS OF THIS INTERPRETATION

We note, first of all, that a very large proportion of the fruitful experiences of life are of the purposeful type. We make permanent changes in our behavior while we are in the pursuit of ends. Consequently we must provide a large number of opportunities for the most educative kinds of purposeful activities in school. Attempting to do this affects in turn our notions of what children should be learning, of the kind of teacher we want, the kind of course of study he ought to have in hand, how this should be made, the choice and use of textbooks, specifications for buildings and equipment, methods of supervision, testing, and promotion, as well as our relations with the parents — to say nothing of the janitor. Aims, subject matter, activities of pupils and teachers, standards of achievement, measures of results — all of these are passed in review, and all are evaluated afresh in the light of this far-reaching conception of life and learning.

Note how the attention now becomes focused upon the activities of the children rather than upon those of the teacher. For many a year we have considered with painful seriousness "how to conduct the recitation," forgetting that the nearest counterpart of the recitation outside the school is perhaps a trial in court or it may be a sermon or a lecture. The school should be the child's club and his workshop, his little commonwealth, his philanthropic society, and in a sense his family. He is entitled to it. It makes up a large part of his world. He *lives* in it. If he lives fully and richly, he will compass a large part of the, to him, potential world, and will find the transition easy when he leaves it behind, to depend for the remainder of his span of life upon other social institutions, many of which the adults of the community claim as peculiarly their own. Why perpetuate the sham doctrine of a merely formal preparation for life? The school *is* life, or should be!

Very well, then, the Project Method means providing opportunity for children to engage in living, in satisfying, worth-while enterprises — worth-while for *them;* it means guiding and assisting them to *participate* in these enterprises so that they may reap to the full the possible benefits.

A POINT OF VIEW, NOT A TECHNIQUE

The Project Method, then, is a point of view rather than a procedure. It doesn't lend itself to direction by rule of thumb. "Exhibits" of it may be misleading — as indeed they often are. One doesn't pick it up by imitation; one must have a sound philosophy and, for that matter, some knowledge of modern psychology and of human engineering in a democratic society as well. There is as yet no easily communicable technique. There can be no recipes. But a number profess to have found a light which somehow makes clearer the path. The new approach to the children arouses more satisfactory response. The pupils take more responsibility. They volunteer. They coöperate. They regard the business of the school as the "real thing," much as they do their out-of-school affairs. They exhibit unexpected practical wisdom and power of self-direction. They grow to an unwonted degree in ability to handle the school tasks. And when the most severe tests of knowledge and skill are applied, behold, Abou Ben Adhem's name leads all the rest.

"But haven't 'good' teachers always used the Project Method without knowing it?" More or less, undoubtedly. At all events, like Molière's physician who learned at forty that he had been speaking prose, they ought now to be very happy on finding it out. Possibly some of the more concrete accounts of what is going on, which succeeding chapters will present, may help to answer the question.

DISCUSSION

1. What are the principles upon which the Project Method is based?

2. A school system wishing to introduce the Project Method asked some teachers to describe in a general meeting the project work that they had tried out the previous year. Four teachers talked. Each of them described a sand table. What results might be expected? What sort of program would you suggest for a teachers' meeting that aims to give inexperienced teachers a better idea of the Project Method?

3. In Miss Warren's food project, what attention was given to organization? (*Journal of Educational Method*, September, 1921.)

4. A cartoon in a newspaper pictured (1) a small boy shoveling snow from his walk and telling his mother that he hated it; (2) the father out hunting for the boy, who had disappeared, leaving the walk unshoveled; (3) the father finding the boy, who was working as hard as possible to shovel snow for a fine fort he was making with some other boys. A principal gave the cartoon the title "The Project Method" and posted it upon the teachers' bulletin board. Show how the picture illustrated the Project Method.

5. What makes some teachers think that they have always used the Project Method?

Selected References

KILPATRICK, WM. H. "The Project Method." *Teachers College Record*, Vol. XIX, No. 4, pages 319–335, September, 1918.

This article established the term *Project Method* in the sense in which it is used in this book.

—— "The Project Method." *Teachers College Bulletin*, Tenth Series, No. 3, October 12, 1918.

A reprint in convenient pamphlet form of the article in the *Teachers College Record* for September, 1918.

OWEN, WM. B. "The Problem Method." *Chicago Schools Journal*, Vol. I, No. 4, pages 3–6, November, 1918. Also in *Journal of Educational Method*, Vol. I, No. 5, pages 178–182, January, 1922.

An interesting analysis of the factors which have contributed to a new philosophy of method.

STOCKTON, JAMES L. *Project Work in Education*, pages 1–88.

A convenient summary of the history of the project idea, which the author traces to Rousseau. Compare the treatment by Maddox in Kandel's *Twenty-five Years of American Education*.

CHAPTER TWO

Experience and Democracy

AN EXPERIENCE

During my early boyhood my family lived on a farm in Illinois. In the wintertime father and the older brothers drove the big bobsled to a wood lot a few miles away and brought home immense loads of hickory and other timber to be cut and split for firewood.

Before I was nine, we moved to Nebraska and settled upon a quarter section which had been improved as a timber claim. Around the house there were large groves of cottonwood and Lombardy poplar, with much fallen timber. In the early spring my father saw to it that a quantity of this dry timber was collected and converted into stove wood, a huge pile of which presently reared its head a hundred feet or so from the kitchen door.

It became my privilege, as the small boy in the family, to carry in great armloads of this wood and fill the old copper washboiler by the stove to keep the fire going for the family cooking. No one need be told that the romance of that occupation soon faded. The situation grew irksome. In educational parlance, I found myself facing a "problem." How could I manage the wood-carrying more pleasantly?

In Illinois we hauled wood with a sled! Why not in Nebraska? Happy thought! I set to work at once. For runners I first chose two boards from near the corncrib, but looking again, I saw the knot holes and rejected these boards. Pieces of two-by-sixes left over from the building of the barn I decided would be better. Then for the tools — my father's saw, his auger, his drawshave, his hammer and nails — and work began.

The thing was bound to be crude, of course, but presently the runners were rounded, the crosspieces in place, standards set up at the corners, and a rope attached. Piling on a load of wood, I dragged my new sled over the warm spring earth and called out, "Mother, come and see what I have made!" Proud moment of achievement! Seldom since have I reached such heights.

Well, that was a project, an individual project, self-conceived, as it happened, and self-executed. The season was too late for it, however, and the thing too clumsy, as I soon found. I turned my attention to wagon-making and for the time put the sled aside. But it was a worth-while enterprise for all that. With some expert guidance and criticism at the right moments it might have been more valuable still, though I am compelled to state that even as it was schools have not often given me so good a chance to learn.

SIGNIFICANCE OF THE SLED STORY: THE PROJECT AS EXPERIENCE

And this was a project! Not merely because I thought of it myself; not because it was carried out in "real" life on the farm; nor yet because I made something and did it alone, but because it was a *complete, purposeful experience.* The heartiness of my purposing will, no doubt, be readily conceded. How about the completeness? In the active type of experience the doer not only perceives a desirable end, he *works toward it.* He plans and executes. He anticipates the satisfaction to come and judges as he goes along what progress he is making. Ideas occur to him as to how to do the thing better. Eventually the goal is reached or failure is acknowledged. The doer will govern himself accordingly next time. Thus life, in so far as it involves situations not under habitual control, goes on. Something more than merely instinctive or automatic activity or passive receptiveness is required.

Now it is precisely the completeness of the purposeful experience which makes it so educative. Planning is as necessary as executing and quite as much in need of being learned. So are judging and appreciating. Unthinking obedience to directions gives small play to these. Projects are good for children not primarily because they like them — are interested — but because projects enable children to *learn* more, to learn indeed much that they can learn in no other way.

Complaint is often made that pupils do not apply what they know. Why should they? They have seldom had the opportunity. Skill in the application of knowledge is gained, like any other skill, by judicious practice, and not otherwise. Truncated, abbreviated experience cannot take the place of full, rounded, complete experience. Where a proper foundation exists, experience may of course be vicarious, second-hand; but beyond question our schools at present err on the side of taking too much for granted. One learns to do a thing by doing that thing; one doesn't learn to do his own thinking, therefore, by letting another do it for him. The project idea looks toward a fuller opportunity for pupils to do things — the kinds of things they have most need of doing — for themselves.

That is the significance of the sled story. I played my part in every stage of the process. A better sled might have resulted if some one had done the thinking for me, but I should have learned less. A better sled might have resulted also if I had had a good teacher to help me, and in that case I should have learned more. Just how the good teacher should have helped me we shall inquire later. He would certainly have done nothing to hinder and everything possible to insure my having a complete, purposeful experience.

THE PROJECT AS DEMOCRACY

But experience is essentially social and is very often had in the immediate company of others. In this fact we shall find the complementary view of the Project Method. For this view of teaching assumes that the class group will always be regarded and treated as a true group; not thirty or forty or fifty individuals merely, but a social unit. What does this mean?

Any good club will serve as illustration. Persons acquainted with each other join together in pursuit of certain common ends and organize themselves appropriately to attain these ends. They talk matters over until there is a good understanding. They plan their activities. They set forth in a constitution — an explicit statement — their purposes and plans.

They elect officers — distribute the tasks or functions — and make such changes from time to time as their affairs seem to call for. In current phrase, the group is *socialized;* the members have a good understanding, they cherish common purposes, they desire to coöperate, and they arrange a division of labor.

The purposes and activities of a club may be bad, or course. Criminals band together. The purposes may be poorly realized. But to the extent that the factors named above are present, there exists a coöperative or democratic group. This it was which the Pilgrims on the *Mayflower* constituted, and this it is which the nation of over a hundred millions constitutes today. Contrast, if you will, the castes of the feudal system and of Russia under the Czar — or under the dictatorship of the proletariat, too, for that matter. Democracy, autocracy; socialization, individualism — these are the opposing concepts.

Now, the Project Method seeks to be true to the democratic ideal. If democracy is good for grown-ups, it is good, so far as may be, for those growing up. Certainly the way to learn how to participate in democracy is by participating, by doing that and not something else. Freedom and responsibility educate — *for* freedom and responsibility. That seems clear. The problem is mainly one of ways and means.

LIVING, LEARNING, AND TEACHING

There are difficulties, to be sure. To these we must in due time address ourselves. But first let us get the idea. The Project Method is a way of living, living by your own wits and in coöperation with others; it is a way of learning — almost *the* way of learning, certainly so far as self-directed activity is concerned; and it is a way of teaching, of conducting the educative process, shaping the educational environment. If only we will get the first two of these principles firmly in mind, the living and the learning, the last will give us comparatively little difficulty. We shall be guided by the pupils themselves — and our good common sense.

DISCUSSION

1. What could expert guidance have done to make the learning greater in the sled enterprise?

2. Three girls from a commercial high school were hired to act as clerks during a sale. None of them could find 1⅓ yards of cloth. These girls began to study linear measure in the second grade, and the study was continued through the grades. Why were these girls unable to make intelligent use of a tape measure?

3. A fifth-grade class was asked to make a poster for American Education Week. The undertaking was joyfully accepted by the children. They decided to represent sunbonnet babies going to school. They discussed ways and means and outlined the work to be done as follows: babies of several sizes, patterns for cut-out letters, a schoolhouse, a background, pasting. The completed poster contained some work by each member of the class. What opportunities did this project offer for *education for responsibility through responsibility?*

4. What is the relation of problem, purpose, and thinking? Illustrate.

5. Explain: "The problem method is an effort to make available for school procedure the results of modern philosophy, modern logic, modern psychology, modern science, and modern industry where they coincide in making the problem the starting point for purposeful activity, for thinking." (OWEN, "The Problem Method," *Journal of Educational Method*, January, 1922.)

Selected References

DEWEY, JOHN. *Democracy and Education*, pages 15–17, Chapters VII, XI, XII, and XX.

Stimulating exposition of the nature of experience and democracy.

—— *How We Think*, Chapter VI.

An oft-quoted analysis of the complete act of thinking.

—— *School and Society*, Chapter II.

The school as a community.

MILLER, IRVING E. *Education for the Needs of Life*, Chapter V.

An excellent discussion of the nature of experience and the place of method in relation to it.

WOODWORTH, ROBERT S. *Psychology*, Chapter XIII.

A brief and readable account of the processes of human as compared with animal learning.

CHAPTER THREE

Why Study the Project Method?

THE VALUE OF THEORY

What one does depends upon his conception of the job. His progress depends, moreover, upon a clear view of what is to be learned and what he must do in order to learn it. These truths are borne out by common observation, and they have been demonstrated by scientific experiment. At the University of Chicago, Professor Judd caused a group of boys to shoot darts at an object under water. Not being aware of the principle of refraction of light, they missed the target. Then he took a part of the group aside and explained the bending of the light rays and how allowance must be made for it. Placing the object in a new position, he invited all the boys to a second trial. Those in ignorance of the facts did little better than before; but the boys who knew what adjustment was necessary made allowance for refraction and showed marked improvement.

Teaching, needless to say, is an art requiring far more skill than hitting an object under water. Learning how to do it proceeds most successfully, however, in the same way. Mere trial and error is wasteful in the extreme and, in view of the issues at stake, hardly to be tolerated if something better offers. It is for this reason that no one can afford to pass over lightly so promising a concept of learning and teaching as the Project Method. The study of it will develop much of the theory indispensable to a better practice.

THE INFLUENCE OF CONCEPTS IN EDUCATION

The possibilities of the project idea become clear when it is brought into comparison with other educational concepts that have been or are now powerful in shaping our teaching policies. Consider, for example, the concept of discipline. For many generations mental growth was supposed by the majority, even of the most intelligent, to be dependent upon the pursuit of hard, disagreeable, and meaningless tasks. Hence Latin and mathematics of the most formal and profitless sort were relentlessly pounded in — often literally with the cat-o'-nine-tails, as pictures of early periods show. Even today Mr. Dooley's famous gibe is not wholly without point: "It doesn't matter what a boy studies so long as he doesn't like it." Not a few, among both the laity and the profession itself, still adhere to a doctrine almost as extreme.

The contrasting doctrine of interest has slowly made its way, but often in garbled form. By contrast with the disciplinary, the interesting persists in being regarded as merely the easy. Some earnest pedagogues still look with suspicion on school work which the pupils like. At the best, interest is too often conceived of as something added from the outside, traceable to the technique of the teacher, not inherent in the experience, the subject matter itself.

Subject matter, too, illustrates the point. The "subject" having been conceived of as a body of facts systematically arranged in a printed book, the term lends itself grudgingly to use in describing free activities, unassociated entirely, it may be, with the printed book. A well-informed teacher of geography remarked feelingly of one of her colleagues, "Isn't it a pity that so able a man as Mr. X should fritter away his time on a subject like manual training — a subject without content!"

Young students in courses preparatory to teaching invariably find it difficult to identify the subject matter of dancing and art. And many a more mature member of the profession can testify that, try as he will, a subject of study means to him a textbook. Grammar, for example, is indissolubly associated with Swinton or Harvey, his copy of which opens automatically to the soiled and much-thumbed pages whereon one may still make out, "I love, thou lovest, he loves."

VALUE OF THE CONCEPT OF PROJECT METHOD

The peculiar service which the concept of Project Method may render is in synthesizing and uniting many of the good ideas about teaching which are current in our day. In business it sometimes happens that it is prudent to merge several of the scattered enterprises which have sprung up in a given field. Educational theorizing has reached that stage. The teacher who seeks to master and apply such a bewildering array of notions as instinctive basis, individual differences, apperception, interest, self-activity, motivation, problem attack, psychological versus logical, inductive versus deductive, transfer, socialization, the school as a training in citizenship, in leadership, in moral development, and in building of ideals has a formidable task ahead of him. A balanced technique can hardly result from the consideration of them as isolated, separate, and independent concepts of teaching. Loss of perspective and faddism are all but inevitable. With such definite plans of procedure as socialized recitation and supervised study, the danger is greater still.

Now Project Method, properly interpreted, implies most of what is best in all these ideas. The basic conception is that vastly the greater part of human learning takes place during the conscious pursuit of ends. In such pursuit obviously the self is active; motives are operative; problems arise and are attacked; new experience is interpreted, if at all, through old. The activity itself is a safeguard against a prematurely logical arrangement of experience — the logic will be that, in fact, of the learner himself. The search for solutions proceeds inductively, while deductive application is made of what has already been learned and promises aid in the present emergency. Conditions favorable to transfer are present, for the attitude throughout is that of using all one's resources to meet the new situations which arise. Groups are, by definition, socialized — they cherish purposes known to be common and coöperate in organized fashion to accomplish them. Finally, good citizenship, the qualities of the leader, moral character, and ideals are all cultivated in the only way they can effectively be cultivated, through intelligent, purposeful activity leading on to satisfaction with the good and dissatisfaction with its opposite.

It is this *focusing* of educational ideas and ideals which gives the Project Method such potentialities.

Fixing our thoughts first of all upon the complete, purposeful experience, often had in coöperation with others, as the great desideratum, we find it easy to assign the various subsidiary and supporting ideas to their appropriate places. The resulting gain in force and unification of effort is apparent. Not since the Formal Steps, as laid out by Herbart's disciples, came across the water, has so central an idea of method occurred to American educators. But while the Formal Steps were just that, *formal* steps, to be taken by the teacher in the overglorified recitation, the Project Method is a philosophy, a view of life and of learning as well as of teaching, capable of infinite variety of application, and rather the basis for a technique than the technique itself.

ORIGINAL CONTRIBUTIONS

It would be inadequate, however, to describe the Project Method as merely a synthesis of current educational ideas. It brings with it new and valuable additions, drawn in large measure from the newer educational psychology. One of the most important of these, without doubt, is that learning is never single but always multiple — an idea partly grasped by older writers who spoke of "unconscious tuition" and "incidental teaching." However, while many have recognized that arithmetic was not all that John and Mary were learning in the number class, few or none have hitherto stressed the importance of this secondary or associated learning and particularly the part method has to play with regard to it. This is one of the chief contributions which Professor Kilpatrick has made to the movement. Its far-reaching significance will be more and more clearly realized as time goes on.

In this view it is not merely the given primary fact or skill with which the teacher is concerned but those associated ideas and concomitant ideals which accompany it. Information gained at the cost of permanent aversion to the subject is quite too common and too easily condoned. Methods of work, in spite of all that has been said and written about teaching pupils how to study, are too seldom mastered. Worst of all, the studies frequently fail to stimulate to any spontaneous or independent effort. They are assigned tasks, to be done and got over with in order to please the taskmaster, not something to be done from zest in the work itself. Our smug complacence in the face of this situation shows how badly a new and formative idea of teaching is needed. Purposive learning goes far to overcome the difficulty.

From Thorndike's educational psychology we derive a suggestion equally valuable. The attitude or "set" of the mind, he says, largely determines both what response a person will make to a given stimulus and whether that response will be satisfying or not. In terms of method, this means that the teacher's technique may determine not only *that* something shall be learned, but also *what* that something shall be. Mind set, appropriate response, resulting satisfaction or dissatisfaction, and the consequent strengthening or weakening of the tendency to make that particular response to that situation — this is the sequence. The project attitude is one of expectancy toward a desired goal. In the process of helping the pupils to define their goal, the project teacher takes an important step toward insuring the desired outcome.

SOME OTHER VALUES

It seems certain that a school life made up in larger measure of hearty, purposeful activities is sure to be richer. What the workshop or the office and the club are to the adult, we say again, the school may correspondingly be to the child. Formal recitations of lessons conned from books, however, are more or less artificial and are felt by all to be so. The opportunities for social experience, for initiative, choice, and self-direction, which they offer are meager. They are commonly spoken of as a preparation for something, but to the pupils that objective is too vague, unreal, and far away. Somehow children often fail to take their school life seriously. The real business of living begins when the school day is over. This means half-hearted effort and a habit of indifference. It is largely unnecessary. The school might be — and of course often is — a place to live a full, earnest, joyous life. The Project Method tends powerfully to bring this consummation to pass.

If now we add the thought that the spirit of coöperation is basic to right relations between pupil and pupil, pupil and teacher, teacher and supervisor, and the school and the home, we shall make a strong case for an ideal of method which implies every reasonable effort to secure full and effective coöperation as the condition antecedent to all school activity, be it work or play. Some have even affirmed that the resulting freedom from friction and strain makes for better mental and physical health on the part of all concerned.

DISCUSSION

1. How has the Project Method helped to put content into manual training? (Read STARK, "What Are Manual Training Teachers Trying to Do?" *Journal of Educational Method*, June, 1923.)

2. A group of third-grade children worked together to dress some small wooden dolls to represent their world neighbors of China, Japan, Arabia, Holland, and the Arctic Circle. What primary facts could be learned through this work? What associate learning would accompany the learning of primary facts? What concomitant learning might be expected?

3. A certain school needed to improve its penmanship. In a teachers' meeting the principal presented samples showing the form and speed of the penmanship in each room. The quality of the work was discussed, and the points needing improvement were listed. It was decided that an immediate effort should be made to bring the penmanship to a higher standard. How could a teacher make use of mind set in this work?

4. Citizenship is a matter of spirit. Spirit cannot be taught, but it can be developed. How does the Project Method aim to develop desirable qualities of citizenship?

Selected References

BAGLEY, W. C., BONSER, F. G., KILPATRICK, WM. H., and others. "Dangers and Difficulties of the Project Method and How to Overcome Them." *Teachers College Record*, Vol. XXII, No. 4, pages 283–321, September, 1921.

Constructive criticisms of the project idea made and answered.

DEWEY, JOHN. *Interest and Effort.*

Shows that the two are not opposed but correlative.

—— *Moral Principles in Education.*

Indispensable in relating moral education to the fundamental processes of all education.

Kilpatrick, Wm. H. *The Project Method.*
Re-read, noting the theses which the author maintains.

Stevenson, J. A. *The Project Method of Teaching*, Chapters I and II.
A formal analysis of results to flow from the Project Method as contrasted with other types of teaching.

CHAPTER FOUR

THE RÔLE OF THE TEACHER IN THE PROJECT METHOD

LIVING AND LEARNING

As we have seen, the project idea is many-sided. Consideration of it brings to our attention the fact that much of life is lived in the conscious pursuit of ends. Indeed, the glory of the human being lies largely in this: that he can control his experience with an intelligence denied to the lower animals, which are capable of little more than instinctive and habitual responses. Few of the other animals enter his realm, even to a limited degree. Man alone has foresight and pursues the far goal. He alone in any real sense conceives and executes "projects."

By that reconstruction of his experience which attends his various enterprises he *learns*. And he *knows that he is learning and how*. He can profit by his experience to learn more economically next time. In short, he can acquire conscious methods of learning. Dependent, like other animals, in large measure upon trial and success, he can nevertheless make inferences which will serve him in the future and greatly facilitate his learning, his adjustments. Of course the use of his intelligence is not, strictly speaking, confined to learning through enterprises, but the point is that it is most freely exercised in connection with them. Now the project idea seizes upon this fact and seeks to capitalize it, to increase the economy and efficiency of school work by the application of it. In a word the Project Method is, from one point of view, a method of learning. The theory of it constitutes, therefore, one of the larger chapters in the educational psychology of our time.

A METHOD OF TEACHING

Learning, however, takes place most economically under properly controlled conditions; hence the school and the teacher. The Project Method is also a method of teaching and, as such, challenges the attention of all who seek the means of enabling children to attain the utmost possible in the way of desirable growth with the least waste of time and energy.

To call the Project Method a method of teaching is, however, to invite trouble. "Method" means, in our traditions, a way — or better, *ways* — of conducting a recitation. For many years our pedagogical literature has tended to center in the theory of the recitation. We have had a formulation of the method of the recitation and more recently types of the recitation, the socialized recitation, and so on. To many, perhaps to most, the discussions connected with these topics have suggested merely a procedure or a series of procedures. At the worst they have been taken as outlines of plans or patterns to be carefully followed. "Do this and this and this; then dismiss the class till the next lesson." There are those who contend that such following of rules and patterns is all that most teachers are capable of; hence they say, "Give prescriptions."

The Project Method is as yet free from a burden of precedents. Some apparently would saddle it with them, the more objective and capable of imitation the better. But such counsels will not prevail. The project idea is too firmly grounded in the new views of the school and the newer psychology of learning to permit of its being thus debased. We shall develop principles, not merely practices.

THE TEACHER'S PART

How, then, shall we characterize the rôle of the teacher in the Project Method of teaching? It is, first of all, a many-sided one. Since purposes may vary without limit, and since individuals and groups, in carrying out their purposes, will present a wide range of needs for guidance, it is impossible to lay down a formula for conducting a recitation by the Project Method. The teacher's business is to "organize situations so as to call out desirable responses and make them satisfying." In doing this, he will find himself playing numerous rôles.

This is the first general principle. In the Project Method the rôle of the teacher is a varied one. He is leader, chairman, chief interlocutor, coach, umpire, taskmaster, authority, judge, adviser, sympathetic listener, chief performer, examiner, guide, or friend as occasion may require. Which will be appropriate can only partly be foreseen. The circumstances must determine, the state in which the pupils are, the stage which their enterprise has reached. Certainly a pre-arranged pattern by which to conduct all recitations will seldom be found to fit.

This is no task for the mechanical mind or the blind follower of routine. It calls for adaptability. The project teacher must be versatile. He must play the game as the circumstances demand. He will anticipate but will not arbitrarily determine what the next move of the pupils will be. Above all he will expect each class, each pupil, and each lesson to be in some way different.

THE STAGES OF A PROJECT

Logically we may distinguish certain stages or aspects of a project and we may describe in general terms what the teacher's relation to each must be. These stages may be named categorically as follows:

1. A situation calling for adjustment.
2. The defining of a purpose to adjust it.
3. Casting about for solutions and the formulation of plans.
4. Carrying out the plans, with such modification from time to time as seems best in view of the end.
5. Judgment of the degree of success or failure attending the enterprise.
6. The accompanying feelings of satisfaction or dissatisfaction, with the resulting attitude as to the future.

Life in reality is, of course, hardly so simple as this analysis would seem to indicate. Nor does one consciously pass through in chronological order these separate stages. Projects are often quickly executed and with little awareness on the part of the actor of the elements of his act. Nevertheless, as a norm around which to build our discussion of the teacher's rôle, the analysis may serve a useful purpose.

A study of school projects will make clear that situations conducive to worth-while projecting are sometimes hit upon by accident, sometimes planned by the teacher, and sometimes waited for. In order that a course of study may be carried out, the situations must, obviously, be mainly planned.[1] Contrary to a too common belief, it matters little whether the teacher prepares the situation and suggests the purpose or whether the pupils hit upon it unaided. The important consideration is that they should clearly grasp the purpose and enter wholeheartedly into it. Obviously the greater the practice of initiative in purposing, the greater the growth will be in this respect. Hence the teacher will welcome the spontaneous suggestions of the pupils and aid in evaluating them. But he will adopt neither a policy of watchful waiting nor one of supine acceptance of whatever is offered. *The teacher will choose his leads.*

SITUATIONS TO SEIZE UPON

Current happenings or conditions in school and out offer many opportunities for projects which will further the avowed purposes of the school and cover portions of the subject matter to be taught. For subject matter is nothing but selected experience, and the more closely connected it is with some phase of present life, the better. Typical instances are those of a circus in town, the need of warm lunches, the distribution of milk in the school, a famine, an assembly to be conducted, a reception to be given, the visit of a noted man from abroad, the publication of a new book, the need of a card index, a room to be decorated, and a family in need.

---

[1] This discussion assumes throughout that the schools will have systematic courses of study and that they will be carried out.

To the teacher alive to the generic nature and social value of the arithmetic, geography, English, music, and drawing that he teaches, far more occasions for useful projects will occur than might be thought. So far as the solutions of life's problems which these subjects embody are operative and vital today, they will be found in constant use in the community, including the school community; and hence the teacher who takes something more than a formal view of them will find project opportunities all along the way.

A mere opportunist policy will, however, prove wasteful and insufficient. The school must perform a selective function. Teachers must plan. Hence in the long run the teacher's rôle with regard to the project situation is to help the pupils see it. He will prepare their minds, not for something *he* is about to do, as the Rein-Herbart disciple would have it, but for something *they* are about to do. There is a world of difference, though at least one writer has obscured the issue by arguing at length for vicarious or communicated projects as though they were the real thing. Hearing about the Roosevelt Dam is worth while, but it does not take the place of learning by systematic efforts how to find out about it for yourself. We learn to do a thing by doing that thing and not something else.

Accepting, then, the familiar doctrine of apperception, the project teacher begins where the pupils are and brings to their attention facts or considerations likely to arouse in them ambition to go where they ought to be. If it is to be learning about cotton, Charlie's blouse and Mary's dress may serve to pique curiosity. If it is a portfolio, then the question, "Where shall we keep our drawings?" If percentage, "How shall we compare what the boys do with what the girls do?" or "How compare our attendance with that of the school?" Would the teacher lead the class into sympathetic understanding of Bryant's experience as recorded in "To a Waterfowl," he calls out, not the facts of Bryant's life, but the testimonies of the pupils themselves as to the lonely moments they have known. In spelling he does not merely assign a few words to be conned; he inquires how many it is proper to misspell, or how you learn a new word, or whether the pupils avoided all mistakes in their last composition. That is, he brings the subject matter home to them, arouses expectancy, suggests possibilities, presents the grounds for intelligent, purposeful action, and very often suggests what that action should be.

DISCUSSION

1. Explain: "He will prepare their minds, not for something he is about to do, but for something they are about to do."

2. Suggest three means that a teacher might use to get purpose into the drill work of arithmetic and spelling.

3. Some of the projects described in this book were suggested by teachers, others came directly from the children. Choose one started by a teacher, and one by children. Compare the methods of work, interest, and educative results.

4. Criticize these preparations for situations conducive to purposing:

(*a*) A student teacher who was to do practice work in geography in a large city school visited the geography period for several days, hoping for an opportunity to introduce the Yellowstone National

Park. She had already planned a procedure for teaching the United States through the Yellowstone National Park.

(*b*) A third-grade teacher provided a variety of materials and tools for a free period. The first day one child wished to work with clay. By the end of the third day four fifths of the class were working with clay. They did not attempt to model anything but seemed satisfied to roll and pat the clay.

(*c*) The first-grade teacher who wished to interest her pupils in the poems of Eugene Field placed a picture of the Rock-a-By Lady on the children's reading table.

(*d*) A principal said to a fourth-grade class, "The first grade needs a fireplace for its Christmas play. Would you like to make one for them? May I tell them that you will send them a fireplace by December fifteenth?"

NOTE. Instead of looking for references on this chapter, examine the sample projects in Part Two, and also in the various issues of the *Journal of Educational Method.*

CHAPTER FIVE

THE RÔLE OF THE TEACHER IN THE PROJECT METHOD
(*Continued*)

THE APPROACH

THE preliminary stages of project activity are exceedingly important. Since the "set" of the pupils' minds will largely determine both what responses they will make to a given situation and also whether those responses will be satisfying or not, the teacher should always be deeply concerned as to the best "approach" to a new experience.

His first duty is to identify as exactly as possible the real nature of the anticipated experience and then to "point" the minds of his pupils toward it. To do this, he will utilize or create a suitable situation and call the pupils' attention to it, leading them on to see the problem which it involves, the interest and value of the problem, and the desirability of solving it. Miss Warren, a teacher in Detroit, was on the lookout for a suitable "lead" to the study of the geography of the North Central states.[1] She noticed the expression, "One of the greatest food-producing sections of the world." Here was a fundamental fact concerning human need, and in the light of it she seized upon a letter received in return for a box of clothing which had been sent to a French orphan as the specific bit of present stimulation to lead on to the problems she wished the class to formulate.

The writer once had occasion to guide a class in the study of Franklin's *Autobiography.* Since the place was Philadelphia, the possibility of beginning with the question, "Who are our greatest citizens?" readily suggested itself. Then came the question, "Who is the greatest man that ever lived here?" Some pupils spoke of Franklin. To undertake to find out what he did and what his achievements were, followed as a matter of course.

---

[1] See the *Journal of Educational Method* for September, 1921.

Children of the fourth grade who wished to assist at a bazaar decided to conduct a refreshment booth. The need of a cashier was soon apparent. Then the problem of making a proper selection was easily suggested and consciously faced. Of course competition led to vigorous practice in numbers.

Lest these illustrations of the project approach may seem too accidental or far afield, it will be well to add that a little ingenuity and forethought will often enable the teacher to find his "leads" in the textbooks themselves. The text of a history or of a geography is largely made up of answers to questions which might reasonably occur to any one who would turn his attention to the given region or country. A great improvement over current procedures would be effected by having the pupils first discover what these questions are. Thus, for example, a page or so of a recent elementary geography is devoted to telling facts of special interest about the city of New Orleans. If the pupils were to elaborate this topic, supplying numerous specific questions of their own, they would be in a good position to read the text and would, I may add, surely seek out other sources of information to supplement the necessarily meager account which the text provides.

At the very least, the teacher may inquire, when a new unit of study is to be attempted, what the pupils expect to learn. Any sort of expectancy is better than the too common passivity, and the teacher who faithfully continues to try to arouse it will go on from strength to strength.

THE PURPOSING

All who regard the Project Method as meaning something more than merely giving tangible expression to ideas — perhaps only ideas vouchsafed by another — agree that an earnest, worthy purpose is the heart of the matter. Unless the teacher can secure this, he fails in the essential factor. And yet mere professions are worth little here just as they are in religion or in politics. "By their fruits ye shall know them."

The fact is that the project teacher must infer from significant indications that the pupils have conceived the purpose; they should not usually be called upon to testify. What he can best do is to make sure, first of all, that the problem or objective is clearly stated and its significance fully grasped. Afterward he will not let the pupils lose sight of it.

Miss Warren's pupils wrote their problem in their notebooks after *they* had formulated it. In other cases, the pupils have written the problem on the blackboard and kept it there. Some such procedure is essential. Bearing in mind that the statement of the purpose should come from the pupils themselves, we shall probably agree that no expression of determination to pursue it with vigor and devotion should be called for.

The purpose, if it be that of a group project, must, however, be *common.* At this point the teacher's ability as a teacher is put to a real test. Success will depend to a great extent upon the general feeling of comradeship and good will which he has been able to establish. For the rest, he must depend upon his good generalship in calling out discussion and contribution from all quarters, and finally committing the group to the project as *their* project. Advance advertising helps here as elsewhere. So does suggesting the possibilities for action. In reality, the purpose deepens with the prospects of success, and these appear in the planning, to which we must proceed.

First, however, let us repeat that the end in view is the most important factor in the project. It is, in one sense, *the* project. It stimulates zeal, determines the choice of means, guides the activity, and provides the final measure of success. It warms the mind to action and makes it most effective. It makes school work intelligent instead of merely formal. When the pupils lose sight of it, they are like mariners without a compass. It is their lodestar.

THE PLANNING

The pupils must not only know what is to be done and have the will to do it; they must also know how. The older generation would perhaps say, "Tell 'em!" That would indeed be the most economical way but for certain considerations. The first is that you understand a plan better when you do some thinking on it yourself. Second, not all wisdom reposes in older heads, however experienced; children are often fertile in suggestion, for they have lively imaginations. Third, and most important of all, the way to learn to plan is to plan — under expert guidance and criticism, if possible, but at least so as to learn foresight through reaping the fruits of it.

Current writings on how to study have supplied much of the information on this phase which the teacher has need of. "Planning" includes, however, much more than learning how to study, even in a very broad interpretation of that phrase. Acquiring information may be the end in view, or solving a problem in geography or mathematics, but so may also the giving of a play or the making of a school garden. Projecting includes practical as well as intellectual activities.

Certainly supervision of study has not usually been so regarded and practiced as to cover what we are here seeking to suggest by the term *planning*, though it might conceivably do so. Too often it has consisted in little more than standing guard, with an occasional prodding of a straggler. Comparatively few teachers have utilized the special study period for developing a program of action either for the individual or for the group. At all events, the need for planning does not arise regularly at a certain hour each day. The project idea implies a much more varied use of the class hour than the scheme of supervised study seems to provide for. In a word, the project is a new unit of instruction and requires its own appropriate technique.

Specifically the teacher's part in planning is to call attention to the need of it and to provide the opportunity. He will call out suggestions from all quarters, particularly from the less aggressive pupils, and will get the possibilities clearly outlined. He will warn of the difficulties, challenge the judgment, suggest improvements, hold to the chief purpose, insist upon definiteness, and secure a clean-cut decision. Everybody concerned will appreciate the plan, for he will have assisted in its making and have been aware of all the considerations involved.

On one occasion a ninth-grade class received an invitation to give a short play at assembly. "What shall we do about it?" said the teacher. "Make one," said the pupils. "Of what?" Various suggestions were offered and rejected. "It won't act," was the common objection. Presently "Rip Van Winkle" was mentioned, whereat there was great enthusiasm. "But," warned the teacher, "it is too long. We shall have only twenty minutes." To which the class replied, "We can act the last two scenes, Rip's awakening and Rip's return." "And the audience?" "Know the story," they cried.

Then came the planning. The class were quick to say what steps must be taken. They chose the strongest pupil to act as chairman of the committee to prepare the "book"; they picked the artist to prepare the sign to hang before the inn. They urged the pupils most fitted to the various parts into the "try-out," and selected for the part of Rip Van Winkle an orphan with a shock of hair and marked eccentricity of manner. They carried on rehearsals and collected stage furniture. In short, they showed just such industry and intelligence as young people exhibit when they feel that they really have something at stake. The teacher was required to do but little except act as chairman of the meeting and enable the group to carry on its work without confusion or waste of time. Needless to say, the pupils were excellent judges, at the end, of the success or failure of their plans. Their main complaint was, "We did not practice enough!"

CARRYING ON THE ACTIVITY

This example lends itself so well to the illustration of the teacher's part in the carrying on of the purposed activity that I will summarize the main points to be touched under this head. The term *chairman* suggests very well much of what the teacher has to do in project work. The group has an object in view but cannot reach it without order and system. This the chairman can make possible. He will keep the purpose to the fore and see that each new move is made with reference to it. He will often encourage and give *needed* help. He will see that emphasis is properly distributed, will provide for varying contributions from individuals, and suggest from time to time why plans fail to work out and what new ones are needed. He will see that subsidiary projects are properly organized and related to the main issue. In general, having the values to be controlled clearly in mind, he will avoid waste of time and energy.

How all of this can best be done is too long a story for this chapter and must be deferred to our next. Clearly there is here an opportunity for the display of a fineness in management worthy of the artist the teacher should seek to be. Beside it, mere bossing the gang appears crudeness itself.

DISCUSSION

1. A fourth-grade class asked permission to build in the sand table a coal shaft and elevator. A short discussion resulted in the following outline of proposed construction: a coal mine, the shaft and elevator, a coal storage house, a coal town, the transportation of coal to the freight station. What could a teacher do to make and keep the purpose of this sand table construction the common purpose of the group?

2. If you asked the children why they were building this coal mine, what answer should you expect them to give you?

3. In many classrooms very artistic charts and booklets are exhibited. These may bear one of the following titles: Cotton, Wheat, Silk, Rubber. Were they geography projects or art projects? Was the study of cotton a project? Explain your stand on these questions.

4. The following question was accepted with much interest by a geography class: What has helped the United States to become "a young industrial giant"? What was the next step for the teacher? What steps should follow?

5. Why is it essential to have problems definitely stated and kept before the minds of the children?

Note. Instead of looking for references on this chapter, trace these principles in sample projects.

CHAPTER SIX

THE RÔLE OF THE TEACHER IN THE PROJECT METHOD (*Concluded*)

SOMETHING DIFFERENT

THE carrying forward of a project is an acid test for the teacher. It enables him to discover in short order where his chief interest lies. If he has been in the habit, perhaps more or less unconsciously, of thinking abstractly of "results," he will find it hard to concentrate primarily on activities, on what the pupils themselves are actually doing. Not a few find it so. To regard the pupils as means rather than as the end is quite too common, increasingly so with the advance through the grades and high school into college. Even graduate students are sometimes exploited in order that a "scholar" may get on with his pet investigation and publish another book. Many a disturbing quarter of an hour will spring from an honest attempt to decide whether what the students are doing is the best thing they *could* be doing, best for *them*, that is.

Yet this is what the sincere project teacher must certainly do, else all his professions are vain. True, the individual pupil must subordinate his wishes for the sake of others, including the teacher, and he must, in George Eliot's well-known phrase, learn to do the "painful right." Nevertheless, the pupil is the central point of reference and his growth alone matters. By that principle the teacher must be guided.

A larger place for trial and error or success will be conceded in project work than is now common.

In our well-meant desire to abbreviate the process of acquiring the most valuable aspects of race experience, we have gone too far in providing ready-to-wear solutions of life's problems. In history, for example, we usually furnish the correct, or alleged-to-be-correct, interpretations lest the pupils should get incorrect notions. How absurd the practice is appears at once when we compare two or more "authorities." They fail to agree! What young people need is not so much stock opinions as practice in forming their own. In the process they will undoubtedly absorb and retain far more information than they do now — which is none too much, as all investigations show.

When may we expect textbook writers to dare more boldly in this regard? Not until teachers are prepared to demand it. A recent text in American history tells the reader that if he will look on the map of Europe as it was in the sixteenth century, he will see that three nations dominated the western part of it. From this he will understand why these nations were so largely represented in the early explorations of America. But the writers never really intended that the reader should gaze upon the aforesaid map, much less draw conclusions from it. *It isn't there!* The pupil is merely to "recite" the passage.

To say that the present system seems well adapted to prevent pupils from developing sound methods of intellectual work is largely justified by the facts. We are well equipped for the repetition of verbal information, apropos of — nothing.

The project teacher must, therefore, expect to pioneer. Rarely will the single text alone suffice for any considerable portion of the work. The reading lesson that suggests nothing beyond is so far barren and inadequate. Not for long will the arithmetic problems in the book fit the case. Drawing will function largely as expression and music will be put to use. The teacher will have need of varied resources to enable him to guide the enterprises which his class has undertaken. He will of necessity rest heavily on their resources.

Perhaps the teacher's most important function is to help the workers see wherein they succeed or fail, and why. The element of skill — method — is a prominent factor in all school work. Growth in it almost inevitably brings interest. In general, we like to do the things which we are becoming able to do well. Now, only a few facts in history are worth learning so that they are always at command, but the method of acquiring them should be perfectly mastered. Here is the chief place for drill, for thoroughness. Once the ideal and the habit of sound learning are established, there will be no further complaint of lack of information. Yet our too common practice is to demand the information, let the pupils get it how they may. That the learner craves the chance to try his hand, everybody knows. He likes to play the game himself. Show him how. Let him try it. Judiciously and tactfully criticize his effort and shorten the period of adjustment. These are the main steps.

ORGANIZATION AND RETENTION

The project teacher must also see to it that the work "follows through." Not a little of the criticism which the project idea has evoked has been due to a misconception on this point. One enthusiastic advocate exclaimed, when this phase of the doctrine was presented to him, "I never thought of that!" It is very necessary to think of it. Allowing as much as we may for the vividness of the experience which projects insure, we must still hold a brief for definite provision for the organization and permanent retention of the knowledge and skill which we are seeking to impart.

The foundation is solidly laid in the preliminary planning which should go on in the light of the objectives. Relations are likely to be prominent throughout. Nevertheless, *organization and retention should often be aimed at directly.*

How this may be done is suggested by the following example. The topic in the teacher's mind was lumbering. She introduced it by telling how a carpenter had apologized for charging six dollars for mending a few steps. "You know how it is," he said; "a man can carry away ten dollars' worth of lumber under his arm these days." (It was war time.) "Why," she wondered, "does lumber cost so much?" That started the ball rolling. Presently a pupil stood at the board writing, as the class directed, an outline of "What we will try to learn about lumbering."

Then said the teacher, "How shall we go about this?" One girl remembered an article at home; she would bring it. A boy had an uncle in the lumber business in the Northwest and would write to him. Two boys would like to visit the lumberyard near the school and make inquiries. All had the textbook. They would pool their resources. A program of study and recitation was laid out and recorded in the notebooks, and the enterprise was "on."

After some days of report and discussion, accompanied by numerous objects, pictures, and books — to the expressed alarm of the janitor — the teacher remarked, "Of all these facts that we have gathered, which shall we try to remember always? How?" A revised outline was now composed, a plan of review and fixing of facts agreed upon, and the work steadily continued. Every child was now a more or less willing and intelligent participant in this review. He was in a position to help. Examinations, so far from being dreaded or resented, were sought and welcomed. They were seen to be a necessary means to the end! Besides, why should anybody fear them? The pupils knew, and they knew that they knew.

That such a procedure does actually get the results, there is already considerable evidence to prove. Classes so taught meet the usual subject matter tests better than others — a good deal better than others — and that without any extra expenditure of class time.

That the class in lumbering got much more out of the work than the facts themselves is obvious. They consciously used a good method of work. They got something of the ideal that one should remember the important parts of what he learns. They practiced a method of accomplishing this; and they passed judgment upon how well they succeeded at it. That future studies in geography went more rapidly and resulted even more favorably is not surprising. Such work requires skill and a sense of values. Both of these were cultivated. There was a definite standard of reference — and hence each could judge for himself.

Particularly worthy of note is the development of ideals. An ideal is merely an idea plus a tendency to act upon it. It is really a judgment of values with a personal reference. It is the product of experience, actual or vicarious. One faces a problem, he finds a solution, and judges that solution satisfactory or the opposite. He governs his future conduct accordingly. Ideals communicated merely as ideals, however, are feeble. One must *realize* their value for himself. He must "go through it." Hence the importance of the Project Method in this regard. The teacher helps the pupils to realize the problem and the value of the solution. What is called appreciation is, in one sense, merely the emotional concomitant of the process. We needn't worry about it. Indeed, the outcome will probably be better if we don't.

Appreciation may, however, very properly be expressed. No small part of the teacher's task is both to call out frank and just words of appreciation from the class and to give them himself. Only so can the sense of values have its proper chance to grow. The danger lies, of course, in false sentiment and injudicious lack of restraint.

How the teaching of ideals may be accomplished by the Project Method is illustrated by the following account of the treatment of Browning's "Hervé Riel." By way of approach, the teacher said, "Children, if a man offered you a thousand dollars, would you take it?" "Yes, of course," from the impulsive. "It would depend," replied the more cautious. After the discussion of the situation had brought the issue clearly before the house, the teacher called attention to Browning's story. It must now be read through to enable each to learn just what happened. Considerable explanation and interpretation were necessary to make sure that all did know fully and exactly that.

Then followed speculation as to why the hero refused the offered reward. "Didn't he know how much he had done? Did it seem easy to him? Was he too patriotic to be willing to be paid for serving his country? Did he regret it afterward? Do we regret it now?" So far as the class responded to the situation as real, they undoubtedly strengthened in no small degree their conception of the beauty of unselfish service, freely given by him who can.

In this incident are all the elements necessary to the development of an ideal of conduct. The data are there. The issue is joined. Decision is called for. Each will judge as best he may. That most of the children "appreciated" the hero and approved of Browning's "monument" to him is fairly certain. The technique of project teaching went far to insure both results.

DISCUSSION

1. Suppose some children wished to make a model of the Panama Canal. What reference material could a teacher provide or suggest? How much of it should he have ready to put into the children's hands?

2. Lack of organization has done much to hurt the reputation of the Project Method. Explain how this has been done.

3. Discuss and illustrate the teacher's rôle in regard to organization in projects of the construction type and of the problem type.

4. How can the project teacher care for individual differences?

5. What objectives does the project teacher rank with knowledge of facts?

Selected References

CHARTERS, JESSIE A. "The Problem Method of Teaching Ideals." *English Journal*, Vol. VIII, No. 8, pages 461–473, October, 1919.
Supplies a psychological basis for technique.

HECKERT, J. W. "The Organization of Instruction Materials."
A dissertation for the doctorate.

MCMURRY, FRANK M. *How to Study and Teaching How to Study.*
Long the most useful guide in its field.

PARKER, SAMUEL C. "Problem-Solving." *Elementary School Journal*, Vol. XXI, Nos. 1–4, September–December, 1920.

CHAPTER SEVEN

Types of Projects and Their Technique

PROJECTS CLASSIFIED

In his first article on the subject, Professor Kilpatrick classified projects as follows:

Type 1, where the purpose is to embody some idea or plan in external form, as building a boat, writing a letter, presenting a play.

Type 2, where the purpose is to enjoy some (æsthetic) experience, as listening to a story, hearing a symphony, appreciating a picture.

Type 3, where the purpose is to straighten out some intellectual difficulty, to solve some problem, as to find out whether or not dew falls, to ascertain how New York outgrew Philadelphia.

Type 4, where the purpose is to obtain some item or degree of skill or knowledge, as learning to write grade 14 on the Thorndike Scale, learning the irregular verbs in French.

He remarks that "it is at once evident that these groupings more or less overlap and that one type may be used as means to another." In his contribution to a symposium on "Dangers and Difficulties of the Project Method and How to Overcome Them," at Teachers College in March, 1921, he enlarged upon the description of these types and made one notable extension. He omitted from type 2 the parenthetical "æsthetic" and included under this head purposeful enjoying or appropriation of experiences of all sorts wherein the person is a spectator rather than an actor.

Mention of this classification calls to mind the point made in the first chapter of this book; namely, that there are two schools of thought with regard to the project idea. One group tends to limit the concept to one particular type of activity, such as planning and doing something "practical," though there seems to be no agreement as to which sort of activity shall be selected. The other group seeks a unifying conception, a philosophy of method, and so far as it uses the term *project* at all, applies it in a broad and somewhat inclusive sense. No one, I believe, uses the term *Project Method* to cover every possible or desirable kind of learning or of teaching. Much learning is obviously the result of circumstances which the learner did not and perhaps could not in any way control. Teachers, it is freely admitted also, should at times coerce, not priding themselves, of course, on the amount of compelling they do or their mastery of the technique of it.

Accepting the view that "projects may present every variety that purposes present in life," [1] we find in the proposed classification several useful suggestions. "Types of projects" calls to mind the somewhat similar concepts, types of learning and types of teaching, and invites us to apply as far as may be appropriate the principles associated with each.

TYPES OF PROJECTS AND TYPES OF LEARNING

We notice, in the first place, that the types of projects named above correspond in a measure with the types of learning distinguished by some recent writers on educational psychology and principles of teaching. To attempt "to embody an idea or an aspiration in material form" is apparently synonymous with seeking expression for — or, better, striving to communicate to others — notions and feelings which you yourself have experienced. Type 1, then, is found in the realm of the arts, fine and industrial. Wherever and however the individual or the group does actually purpose to convey certain impressions, to make a certain appeal, through any appropriate medium (color, sound, movement, wood, clay, marble, or what not), there a project is on foot. And so far as any one possessed of the requisite knowledge or skill guides the artist or artists in finding a *motif*, in choosing the medium, obtaining the materials, designing the object, executing it, and applying criteria of excellence to the work while it is in progress or when it is completed, that person is a teacher. To the degree that he seeks to help the workers realize their own purposes instead of merely imposing his, he may be called a project teacher.

---

[1] Kilpatrick, *The Project Method*, page 5.

The constructive type of project was well placed first. It perfectly illustrates the whole conception. I myself have been engaged in such a project. Some time ago I resolved to present to the readers of the *Journal of Educational Method* a series of articles on method. I judged that the majority of my readers would care most for further exposition and application of the Project Method. I asked myself: "What precisely shall I try to accomplish by means of my series and how shall I adapt it to my audience as I conceive it?" Next came the question of topics and the ground to be covered under each. Specifications for the entire series were written out and were frequently referred to, though departed from in many particulars. From month to month the manuscripts were written and revised. All the while the writer asked himself: "Am I actually getting the idea over? Will this be clear or that sufficiently emphatic to make a lasting impression?" Occasionally some reader made a suggestion or offered a word of encouragement. Ultimately the task was completed and the writer looked back over the whole with critical eye, content with this but offended with that.

This is fairly typical of all composition, whether in language or otherwise. The idea and its expression — usually with reference to the other who is to read, hear, or see — these are the chief factors. Some little children were asked to listen to a bit of music. What movements would they think appropriate? They made up a variety of dance steps, pleased both to invent and to have friendly eyes bent upon their inventions. Other pupils wrote music for certain words and words for music. A high school class made plans for decorating the auditorium. Another class produced a handbook for prospective settlers in their suburb. An entertainment for the mothers, an exhibit in geography, toys for a children's hospital, a school garden, poems for Christmas, boxes for the birds, clean alleys, these are representative of the unending variety of constructive projects which pupils have executed. The measure of their project quality was, please note, *the degree to which the children actually participated in them.* All subjects of study and all extra-curricular activities offer a profusion of occasions for dynamic expression. The puzzle is not to find projects, but to find which are most worth while.

Enjoyment of the natural environment or of what others are doing, Type 2, may also be planned. Very often it is planned, must be planned. One does not find himself in the Yosemite by accident. He goes there, at much expense of time and energy it may be. No one who has ever fought his way to a ticket for the opera in New York will regard the undertaking lightly. In truth, while much worthy pleasure comes unsought, the wise man is he who *chooses* his pleasures and takes the steps necessary to realize them. Certainly he reserves the right to enjoy or turn away. He is not bound to enjoy.

This type of project is so often closely related to others — as an end to which they are means — and it seems in itself to offer so little room for "teaching," that not a few profess to be offended by such an extension of the meaning of the term *project*. I well remember how one serious-minded but unimaginative pedagogue once called me to order for using the expression, "teaching poetry to little children." "What," he exclaimed, "is there to teach?" A beginner once solved a similar problem in startling fashion. She directed a class of sixth-grade pupils to read Warner's *A-Hunting of the Deer* with these memorable words, "Find out all the ways there are to kill a deer."

If teaching is indeed organizing situations so as to call out desirable responses and make them satisfying, then it is possible to teach appreciation. "To appreciate," says the Standard Dictionary, "is to be sensitive to and sensible of the inherent worth and value of a thing." Certainly one may help another to discover and prize values to which he might otherwise remain insensitive. The search may, on the learner's part, be both willing and conscious.

A fifth-grade teacher presented Hogg's "A Boy's Song" to her class. First she called attention to the title. "What," said she, "do you think a boy is going to sing about?" (Business of pupils offering various suggestions.) "Let us read the song and find out what he did sing about." (Teacher read entire poem aloud.) Then followed a conversation in which the idealized experience of the poem was developed and realized, the children reading the stanzas silently as the study proceeded. Then ensued a second oral reading of the entire poem, this time by a pupil, each child trying to see all the places mentioned and imagine the fun of visiting them. Finally the class hour closed with expressions of preference by the pupils for the stanzas which they liked best and which might well be known by heart.

This exercise undoubtedly gave much real joy to the pupils. They enjoyed the poem as an expression of potential experience — they lived it over again. The thoughtful pleasure which was afforded was undoubtedly much like that the author intended. Yet at no time was attention directed to the author's technique as in itself something to be observed and admired. The pupils' experience was enlarged in two ways: they read a poem in a good way and they rambled "up the river and o'er the lea." This was learning.

Type 3 is problem-solving. This is theoretically a purely intellectual type; but in practice almost invariably it involves the handling of concrete means, such as graphic or other expression, or proceeds to some practical use, at least in further problem-solving. It is doubtful whether any activity rightly called a project is wholly without a problem element. Choice must be made, and choice means that a problem is being faced. When the goal in view is the truth rather than some practical or emotional outcome, the endeavor may well be called merely problem-solving.

There is, as every one knows, an extensive literature on "problem attack" and "training in thinking." Learning by problem-solving and learning to solve problems have both been much emphasized in our best current educational writing. The chief reason for identifying them with the project idea is, first, because it does embrace them, and, second, because the association tends toward a fresh and possibly more vital interpretation.

As a matter of fact, a vast number of so-called problems were never problems to the pupils who worked at them. They were merely *stated* problems, not problems felt as real occasions for effort at adjustment in any vital sense whatever. Efforts at solution were not due to an intellectual interest but to a desire to do the assignment and merit the teacher's approval. Moreover, in spite of the excellent books on how to study that have been provided, relatively few teachers as yet give much effective training in methods of work.

All investigators agree that the teacher, generally speaking, either "asks 'em" something or "tells 'em" something most of the time.

Now the Project Method professes to favor new units of study, new rôles on the part of both teacher and pupils, and new standards of judgment as to success or failure. In this lies the hope that problem-solving may become a more lifelike thing, with correspondingly greater benefits. Not the least of these benefits will be increased ability to perceive and select those problems whose solution is most worth while. In a regimen wherein the students' problems are all selected and presented by teacher or textbook, little or no place is reserved for this. The Project Method demands that the student have large opportunity to practice finding and stating problems for himself.

The fourth of the proposed list of types remains. This may be called the achievement type, though at the risk of confusing it with type 1, the constructive type. Ability to do something according to a certain standard of excellence seems to be the chief mark. One knows, or he doesn't; he can make "change" correctly or he cannot; he is lazy or he adopts the Roosevelt motto of the strenuous life and works every day with all his might. In any realm of human endeavor in which a standard of attainment may be set up, there projects of this sort may be found.

The notion has far-reaching implications. It goes far to meet the objections of those who profess to see in the project movement a narrow program and a tendency to a lack of thoroughness. On the other hand, as in the case of problem-solving, there is grave danger of our having merely the old formality with a new name. Worst of all, perhaps, is the possibility of our enlisting the energies of the pupils to help us succeed with much educational stuff which should have gone to the junk heap long ago and of late has seemed on the point of landing there.

What the pupils should be learning is, however, a problem of the curriculum, not primarily a problem of method. In any case it will be long before all learning is instrumental. Intellectual activity and physical activity, moreover, are natively grateful and need no extraneous motive. Provided that the achievement be in fact worth while, we need assign no ignoble place to a project which has only some form of knowledge, skill, or habit as its goal.

TYPES OF TEACHING

As with types of learning, so with types of teaching; useful analogies and applications appear when the types of projects are reviewed. So far as lessons for information, for habituation, for skill, for problem-solving, and for appreciation have squared with the psychology of learning, they have tended to illustrate elements of teaching likely to be useful in the Project Method. The chief possibilities of improvement reside, first, in a better analysis of the abilities to be exercised — the lines of growth, that is to say — and, second, in provision for fuller and more effective participation by the pupils.

Among the chief responsibilities of the teacher in constructive activities is to provide opportunity favorable to invention, design, and choice of materials.

Obviously, ready-made models and blueprints will be banished. Pupils will be stimulated to imagine and plan for themselves. They will be shown how to proceed and then given freedom to try, try again, the teacher meanwhile calling attention to success or failure and, if possible, to the reason of it. He will, of course, not press for results more perfect than the pupils' development and sense of fitness justify.

In achievement projects the teacher usually must be largely the authority as to what constitutes the goal, what the different degrees of excellence are, and must see that each worker has it — or them — in mind. He must guide the practice, establish good conditions for it, and encourage the faint-hearted. He must also apply the appropriate tests, or at least supervise their application. Granted that the objective measures we have actually measure the achievements we wish the pupils to strive for, they are evidently invaluable allies in this relation. As matters stand at present, teacher and pupils must supplement these measures with many informal tests of their own devising. The essential principle is that the pupils should know what they are to learn, how they must go about it, and how far they have progressed.

As already indicated, the pupils themselves should take a hand in discovering, choosing, and defining their problems. The teacher will make certain they grasp the issue and see something of what it involves. He will insure adequate data, stand as the last-ditch opponent of judgment, and see to it that the conclusion is properly checked. Knowing that in the long run methods of problem-solving are worth more to the pupils than any single conclusion or group of conclusions likely to be arrived at, he will cause the pupils to identify the procedures they use and appreciate their values.

Where enjoyment or appreciation is the chief aim, the teacher will arouse expectancy, revive the pertinent associations, and insure adequate *realization* of the experience which the object provides. If he seeks to build up ideals, he will call for judgment of the appropriate values, whether logical, æsthetic, moral, or practical. He will not often attempt, however, to impart ideals as abstract truth.

DISCUSSION

1. From the twenty projects described in this book, choose one of each type. Explain your classification. What overlapping did you find?

2. Suggest changes that might have made any one of the described projects more worth while.

3. In the three projects for the first grade, what evidences do you find of the ability of children six years old to purpose, think, judge, and organize?

4. Give five characteristics of a good project.

5. For the first two months of the year a class recited geography by the topic method. For the rest of the term they searched for facts to answer geography questions of special interest to them. What changes should you expect to find in their methods of work?

Selected References

KILPATRICK, WM. H. "Dangers and Difficulties of the Project Method." *Teachers College Record*, Vol. XXII, No. 4, pages 283–288, September, 1921.

This is the most important reference on types of projects.

La Rue, Daniel W. *The Child's Mind and the Common Branches.*
An aid to understanding the types of learning involved in the school subjects.

Parker, Samuel C. *Types of Elementary Teaching and Learning.*
Presents many concrete procedures which under proper circumstances would probably be purposeful.

—— *Methods of Teaching in High Schools,* Chapters VI–XI.
Suggestive to high school teachers.

Strayer, George D., and Norsworthy, Naomi. *How to Teach,* Chapters IV, VII, VIII, and XIII.
A simple treatment of educational psychology with applications.

CHAPTER EIGHT

CRITERIA OF SUCCESS IN PROJECT TEACHING

HEALTHY development of the project idea in education depends in large measure upon the standards of success which are applied to it. Teachers, supervisors, and scientific students of method are all vitally concerned with them and should give serious and persistent attention to their formulation. Without adequate standards we shall undoubtedly witness flashy imitation passing as the real thing, vagaries freely indulged, reaction, and consequent delay in the evolution of a sound and adequate philosophy of method.

Attempts at the formulation of criteria have already been made, as the references at the end of this chapter indicate. The writer ventures to offer a somewhat different analysis, conscious of indebtedness to others and of the existence of further possibilities. What we need is a treatment at once true and comprehensive but not too esoteric for the rank and file of the workers.

THE NATURE OF THE EXPERIENCE

Thanks to Dewey and his students, the word *experience* has come into fairly common use as a term with which to designate what the school has to offer to children. Life is made up of experiences. By means of them solutions of our human problems are worked out. Through them growth takes place. A "study" is made up of one type of experiences, a series selected because of the control to which it leads.

The task of the managers of schools, course-of-study makers, and writers of textbooks alike is to choose from the possible experiences in a given field of endeavor those most valuable. The problem of method is to set up conditions most favorable to the realization of these experiences by the pupils.

There will be little or no dissent to the general principle that projects which enable the socially most valuable experiences are the best, other things being equal. The trouble begins when you undertake to define and illustrate what you mean by socially valuable. The time-honored conception is that of *preparation* — preparation for citizenship, preparation for social efficiency, preparation for the abundant life, and so on through the list. The school, according to this view, is not a place to do things; it is a place to get ready to do them. How general this notion is one does not realize until he begins to observe it in the current output of books and articles on education. Apparently children have not yet been invested with personalities nor are they in any real sense entitled to live. "Life" begins with entrance upon business, profession, or home-keeping!

Yet Professor Dewey, developing the point of view of that harbinger of the new era, Rousseau, made clear in a series of remarkable addresses more than twenty years ago that the true school is a community and that the child must grow, if he grows at all, not by learning what will be of use to him only in the future but what satisfies his real needs now. More recently Professor Thorndike has provided us with an equally far-reaching analysis of the laws and conditions of learning. That "habits must be practiced as they are to be used" is a saying which gives little encouragement to formal instruction aimed at a goal not now even dimly visible to the one instructed. The teachings of both these leaders point to the desirability of striving in school work for the utmost possible reality.

This suggests the application of the doctrine of apperception. Children can and actually do learn only what their native inheritance or their previous experience has prepared them to learn. Project teaching, it is to be hoped, will help to bring us to a fresh realization of this. That it may reasonably be expected to do so seems clear when we recall that in project work the learner is as far as possible intelligently self-directed. When we are faced with the necessity of letting pupils come *inside*, then we shall ask more curiously what sort of enterprises they can rightfully take a hand in. Much formal reciting of words from books and manipulating of symbols seems likely to drop out in consequence.

As was suggested above, great promise lies in the efforts now being made by psychologists to find out specifically and in detail precisely what is to be learned in the various school subjects. Whether a given experience is as valuable as it could be is a question, in part, of what abilities are being exercised. Thorndike's explanation of how one *reasons* when he reads is an excellent illustration of this. Teachers testify that their pupils often give witless answers to questions relating to what they have read. It appears that the explanation is to be found in the character of the reading done; the pupils fail to check up in the light of the purpose, or to reason as to whether the meaning which they get is the right one, and accept any idea which strikes them. Hence they shoot wide of the mark.

Our first criterion, then, is: What is *the nature of the experience* which the project actually provides? If that experience is richly valuable to the pupils — as valuable as anything which they might have entered into at the time — if they are prepared for it, and if the abilities upon which the worth of the experience mainly depends are in fact freely exercised, we may say that the project is a good one. In the present state of our knowledge we shall do well, however, to apply this criterion only with modesty. A few inventories of adult social uses of various types of learning have been made, it is true, but the master problem is to determine what is socially useful to John and Mary now, how much and what parts of their world they can and should explore and appropriate, both at first hand and through report, including the regions of fancy as well as those of fact, those of work and of play. Few as yet have set themselves whole-heartedly to the solving of that problem.

Meanwhile we must apply common sense — do what is widely supposed to be valuable until we have good evidence to the contrary. The fact that children persistently and universally fail to learn a thing should be accepted as good evidence that a change of policy is justified. Recent investigations have brought to light such things in plenty. Much of arithmetic, geography, and history appears to come in this category. Spelling, on the other hand, is on the way to be saved because we have made it actually useful; pupils learn to spell the words they need. Perhaps geography which should enable children to see the world and history which answered their questions and furnished the stirring adventures which they crave, would fare better. Much of the arithmetic, too, can be made to function as experience.

THE ACTIVITIES OF THE PUPILS

Our second criterion is: To what extent, in what ways, and with what regard for individual differences is *participation on the part of the pupils* actually secured? We may judge the merits of teaching by the nature of the activities going on. Even if we cannot say how far the learners have gone, we can make a shrewd guess as to whether they are moving in the right direction.

This is not to be done with a tally sheet, however. A beginner reported favorably on a poor lesson in geography because he noted that many of the pupils recited. As a matter of fact, the members of the class had been told off and well primed in advance. Each one knew when his question came. The scheme was well camouflaged by the appointment of two or three for each question. Even veterans are sometimes impressed by mad waving of hands or the fact that the teacher manages to consume a low percentage of the time of the "recitation." If the pupils use the time, they are said to be "participating."

Now, as we have seen, in the Project Method participation takes on a new and specific meaning. A project is an active experience which passes through definite stages, though they are by no means always clearly marked. It involves consciousness of a situation inviting adjustment, pondering on ways and means, formulating a program of action, carrying on in the light of the program, and evaluating the progress made with reference to the goal set up. All this implies intelligence, choice, reflection, self-control, appreciation of values; not merely ready obedience to directions, diligence, good memorizing, and skill in taking the cue. Definite qualities of excellence attach to a series of functions in project work — qualities often heretofore neglected or even belittled as not proper for children, for mere learners. Hence the observer of project teaching must guard against the obsession of the "method of the recitation," as that concept has commonly been interpreted. Pupil activities in project work are those appropriate to enterprises everywhere. Other things being equal, that project is best which is most fully in the hands of the pupils throughout. What some of the "other things" are, has been set forth in previous chapters of this book and need not be repeated here. Two checks upon this criterion are presented below.

A word as to individual differences may not be amiss. The fact and importance of variation of ability in any class are both now well known. Various expedients for adapting school work to this variation have, moreover, been proposed and tried, among them segregating according to intelligence, fast-moving and slow-moving groups, and minimum and maximum courses of study. None of these, however, nor all of them put together can take the place of skillful teaching. No stimulus will produce the same response on the part of two or more pupils. Nor should it. It is quite too common to make the naïve assumption that by some means it will be possible to secure a full and satisfactory reaction from every pupil to every situation set up. Democracy means equality of opportunity, no artificial handicaps or special privilege; but it never can mean equality of *contribution.* Indeed, the glory of democracy is that it encourages original contribution, assumes a division of labor.

The project teacher will strive, then, to open the door to the best each has to give. He will see that each contributes something and receives the credit that is due. Whatever knowledge he can obtain by testing or otherwise as to the potentialities of his students will be indispensable. He will never proceed as though each pupil should do exactly the same thing with the same degree of success as every other. Thus he will be saved from discouragement and pessimism — perhaps from coming to the settled conviction that many of the children are possessed of the devil. What is more important, he will avoid damning some by giving them the habit of failure. What the legitimate outcome of that is, the park benches amply testify. Each according to his ability — and all have some!

THE RESULTS OBTAINED

Good intentions are, of course, not enough. The experiences must actually bear fruit; the activities must arrive. If we knew to a nicety at what controls we ought to aim and had adequate means of measuring them, results would obviously be the fundamental and all-but-sufficient criterion by which to judge the success of teaching. Unfortunately we are far from perfection in both of these regards. Hence we must still walk by faith as well as by sight.

In practice the textbook embodies the standard most widely observed. The geography in use is accepted as indicating what the pupils should learn about man and the earth; the reading book for the grade is to be read aloud fluently, and so on. Even where there is a detailed course of study, the majority tend very naturally to be guided by the text.

This entails a huge responsibility for the author and publisher, and it is well that both are so responsive to new ideas. Many recent works go far to insure constructive activities. Ideally, of course, books should be merely means to be employed in reaching certain ends — practice material or necessary information. In fact they are much more: they direct activity and often present a formal organization of the outcomes to be reached.

At this point the project teacher will seek to stand guard. She will properly suspect the efficacy of ready-made knowledge and belief and will seek to preserve for her pupils their right to make their own organization. She will not be deceived by the glib recital of the results of the thinking of another into supposing that the pupils have done some thinking for themselves. She will hold that the mastery of the methods of organization is equal in importance to the knowledges and skills themselves.

And she will look farther. Knowing that learning never comes singly nor is completed within itself, she will judge her success not merely by the stated modicum of knowledge or skill acquired but also by the spread, the reaching out, and the leading on, which takes place. Household arts frequently set girls to beautifying and improving their own homes and to planning ways and means for doing more of it in the future. The young people in a civics class in Charlestown, West Virginia, undertook to improve the playground facilities of the city and succeeded. Some fourth-grade boys were inspired by the story of Raleigh and the cloak to offer to clean the blackboards. Occasionally the school studies make some observable change in conduct, in social or intellectual behavior, but in general none seems to be expected. The project teacher will be satisfied with nothing less.

ECONOMY

Finally, we may apply the principle of economy — the best results with the least waste. Much has been written about "economy of time" in the last two decades. Most of this has had reference to elimination of the non-essential in subject matter. The project movement seems likely to assist in this. As suggested above, it tends to emphasize those aspects of experience most indispensable to present-day American life, particularly to the lives of the children themselves. Project teachers would willingly eliminate the socially valueless in order to teach well the things that enrich life and make it really efficient.

In two or three respects the Project Method may claim special distinction for economy. One of these is the absence of strain and worry. In good project work there is no fear or dread of the teacher, no pressing for attainments beyond the pupils' powers. There is also a salutary variety of occupations in the day's work, which is much less wearing on the disposition than the more formal grind to which we have been accustomed.

There is, too, more unity of experience, less pigeonholing of knowledge. Hence the learner is more likely to be able to bring his resources to bear on a given situation. Learning is actually more thorough because it is widely used. This is particularly true of all the arts, but it holds for the sciences too. Pupils are conscious of their methods of work and definitely strive to improve them.

Constant use of one's equipment tends, that is, to the necessary "follow-through." But this must be systematically provided for. Pupils themselves should know what constitutes a good achievement in a given field and should thus be able to pride themselves on their record. Here the published results of standard tests will be useful as well as informal tests based upon them. Psychologists agree that the learner must be informed as to the progress he is making. Good project teaching seizes upon or devises measures that will perform this service.

We need have no fear that project work will suffer by comparison with more formal methods when judged by the criterion of economy. More may be learned in a given time by participation in well-planned enterprises than in any other way, provided a wise guide and interpreter aids the pupil to profit to the full by the experience. Even if we demand only so much spelling, arithmetic, and geography as such, we shall get it more certainly with the pupils' help than without it. So long as the course of study calls for these, so long the teacher must see that they are acquired. The skillful project teacher discovers that he can insure a larger acquirement of these conventional knowledges and skills than ever before, while giving them a setting rich in stimulations not formerly brought to bear. Hence he gladly agrees to be judged not only by the kind of experience and activity found in his classroom but also by the results actually attained and the economy with which they are reached.

DISCUSSION

1. Using Herring's criteria as standards, criticize one of the projects described in this book. Herring, "Criteria of the Project," *Teachers College Record*, 1921.
2. Describe three changes that would make the usual course of study a more valuable guide.
3. Contrast the old recitation with the newer class discussion in these respects: subject matter, assignments, questions and responses, use of textbooks and reference materials, organization, facts learned.
4. Outline a technique for drill in one of the "tool" subjects.
5. Give a two-minute talk on the point of greatest interest to you in Goodrich and Franzen, "Criteria for Judging the Value of Projects," *Journal of Educational Method*, May, 1922.

Selected References

HERRING, JOHN P. "Criteria of the Project." *Teachers College Record*, Vol. XXII, No. 4, pages 329–333, September, 1921.

Perhaps the earliest article on this topic.

GOODRICH, BESSIE B., and FRANZEN, RAYMOND H. "Criteria for Judging the Value of Projects." *Journal of Educational Method*, Vol. I, No. 10, pages 352–361, June, 1922.

This article is fully illustrated and hence specially valuable.

HORNE, ERNEST R. "Criteria for Judging the Probject." *Educational Review*, Vol. LXIII, pages 93–101, February, 1922.
Mainly from the standpoint of subject matter.

McMURRY, FRANK W. *Elementary School Standards*, Chapters I–VII.
Four concepts of method employed by the author in observing recitations in the New York City schools in 1912.

STEVENSON, JOHN A. *The Project Method of Teaching*, Chapter V.
Certain implications of the Project Method.

CHAPTER NINE

POSSIBLE APPLICATIONS OF THE PROJECT IDEA

THE proof of the pudding, to be sure, is in the eating. Whether the project idea shall assist or hinder educational progress will depend ultimately upon what applications are made of it. Either the idea will be used with discrimination, insight, and due regard to particular conditions, or it will be treated as a universal panacea, a substitute for brains and honest work, and a reform to be worked wholesale regardless. There is in reality little danger of overenthusiasm and excess of zeal. Tradition has a way of going serenely on, undisturbed by such flurries of new thought as occasionally assail it. New names do come into use in America very readily, but, alas, too often they designate what are in fact the same old practices. On second thought we conclude that one can afford to let his zeal for the project idea burn rather fiercely. There is no great likelihood of a stampede.

SUCCESSIVE DEGREES

Two general policies as to the application of the principles of the Project Method suggest themselves. In pursuance of one we should at once undertake to reorganize all school work in terms of projects. Whether this would mean abolishing the present so-called subjects of study and substituting for them occupations, life-units, inclusive projects in work and play, is not clear. In some experimental schools programs not unlike this have been carried out. The reader will easily recall examples. Few are in a position, however, even if they deemed it wise, to depart so radically from the beaten path. The higher the grade, moreover, the more difficult it appears to be to do so, until indeed you reach the seminar in the graduate school.

The other tack may be sailed by all. It is marked by honest endeavor to be governed by the project idea in any way and to whatever extent seems possible and desirable under the circumstances. Those who choose it expect to improve with practice, to learn by experience how far to go, and thus gradually will replace external direction with self-direction without sacrificing the orderliness and selective character of the life of the school, or the advantages to be gained from the organization of knowledge and the indispensable discipline of hard work. They will make haste slowly and maintain the pragmatic attitude throughout. Good men and true have grown up under the old régime — either because or in spite of it — and may be expected to do so still. There is time to test each step before taking another.

Passing from the more certain and obvious to the more difficult and complete applications of the Project Method, we shall discover some such sequence as this:

1. The improved assignment and more effective direction of study.
2. Motivation of all types of learning, including drill.
3. Project units identified more or less completely with particular subjects, though often employing other subjects as means.

4. More inclusive undertakings, carried on without special regard to any one subject and often designated as extra-curricular.

We will consider each of these in turn, regretting that requirements of space prevent anything like adequate treatment.

DIRECTION OF STUDY

The teacher is under obligation to make sure at least that the student knows what to do and how to do it. This is by no means always the case now; almost any one who visits classrooms frequently will tell you so. Perhaps teachers underestimate the difficulty of the tasks they set, or depend upon the textbook, or simply do not think about the matter because they also were unguided. Whatever the cause, they undoubtedly fall short at this point. Their pupils frequently do not know what to aim at or when they have succeeded. In arithmetic the pupil tries for the answers; in history, to remember the facts; in reading, to get over the words without stumbling. Consequently there is too little cumulation of the power that will presently make the student a relatively independent worker. He gropes blindly from day to day and only slowly, if at all, comes to the light.

A young man with a college education but no training in teaching passed the examination for high school teachers and was assigned to mathematics. He was soon in trouble. Some of the students were stupid or lazy; they were failing in algebra — ought to be dropped, in fact. So he reported. But the principal had his suspicions. He looked in on the class. Then he invited the worst offenders to come to his home in the evening. He took up, as a whole, the section of the algebra in which they were working and helped the students to see what it was all about. Three or four lessons sufficed. Soon the laggards were leading the class! Then the principal told the young greenhorn how it was done. Lucky pupils, to have such a principal!

Part of our difficulty in this connection has been due to our inadequate knowledge of the processes involved in the various school activities. Our psychology was at fault. Fortunately recent scientific investigations have added enormously to the stock of existing knowledge in this field. Little by little we are coming to know just what has to be learned and how it can be learned most economically. No conscientious person will spare any reasonable effort required to master this knowledge, at least so far as it concerns him and his work.

The project idea is a great stimulus in this direction. How can a person lead others unless he himself knows the way? Certainly the pupils must understand what the enterprise is and how to engage in it, no matter whether they regard it as worth while or not.

MOTIVATION

But most educators will now contend that the pupils will accomplish more if the enterprise does seem worth while. True, there are those who persist in confusing interest with ease, and the advantages of doing a disagreeable job under external compulsion with the benefits to flow from doing it of your own accord; but their numbers grow steadily less. Few now are consciously guilty of setting what they believe to be meaningless tasks.

Many school tasks are, however, relatively meaningless, and one of the pressing pedagogical problems is how to make them less so. All project teachers are of course deeply concerned with this. Accepting whole-hearted purposing as central to the doctrine, they must inevitably seek to establish conditions most favorable to it.

So far as possible they will enable their pupils to strive to secure the control of values that are intrinsic, that satisfy typical human needs in human ways. From this point of view the instruments of thought and expression tend to be brought into direct relation with the ends they are intended to serve rather than to be handled formally and in complete isolation.

Thus children write letters to somebody; they study the words they have occasion to write; they make calendars and bookcases and serve lunches; they get up biographies and learn poems for anniversaries; they practice making change and computing in order to act as cashier for the milk committee or bookkeeper for the class entertainment; they give accounts of their reading in order to aid others in finding good books and in enjoying them, and so on through a long list. We have come far on this road in recent years. Some think we are in danger of going too far — not, certainly, if we retain most of the subject matter we now have. By no possibility can a good deal of it be made instrumental in any real sense in the lives of the immature, perhaps of any one.

But in any event project teachers will do well to be on their guard lest they overemphasize some one class of motives. Undoubtedly the joy of learning is worth while in itself and, as Woodworth points out, provides, once the activity gets to going smoothly, all the *drive* required. The danger is, of course, that our skill as drill masters may enable us to teach the less important while the more important waits, or that, what is worse, our pupils may become almost wholly dependent upon us. We must put first things first.

SUBJECT UNITS

This is why we regard motivation as inadequate and why we seek to go beyond it to complete project units. The nature of such units has been set forth in previous chapters of this book and need not be elaborated here (see pages 51–56). Suffice it to say that all of the elements of a complete, active experience are provided for. The pupil not only sees the goal and desires to reach it; he chooses the means, goes forward intelligently with self-directed effort, judges his own progress, and appreciates whatever measure of success he wins. Often he does all this as a member of a joint student enterprise; he works coöperatively with others; and he seeks and welcomes guidance and criticism from the teacher. Very often what he does leads on to other fruitful enterprises, so that even before one activity is completed, another is in contemplation. He learns many things by the way, not the least of which is to say with Kipling, "That is another story."

Note again that such enterprises are not restricted to one particular field of learning. Wherever the learner's purposes may point, there may his heart go also. He may use chisel and plane, or he may merely gaze on the printed page; he may be concerned with the laws of nature or quantitative conceptions of his environment. It matters not so long as his mind is set toward his goal and he knows how and why he is working toward it.

Such experiences are educative. They are not the only sort that is educative, but there is probably no other so much so. With due regard to what is most important to be learned, the modern teacher will seek to provide the opportunity for as many of these units of experience as possible. They may lie largely, if not wholly, within the field of a single subject, and in the present state of our knowledge and school organization this is the type of project with which most teachers should be chiefly concerned. Usually other subjects will of necessity be brought into play, but the organizing purpose will lie in the particular field of study chosen.

Excellent examples of such projects have been reported in most of the elementary subjects and several of the high school subjects. It is notable that the newer disciplines like science, agriculture, and household arts seem to lend themselves more readily to the constructive type of project activity. At the other extreme, subjects like algebra, of comparatively little use in everyday life, have been approached rather from the drill side, in an attempt to arouse enthusiasm for reaching certain definite degrees of skill, to beat one's record, and the like. So far as the Project Method *merely as method* goes, one subject is as good as the other. The question as to what the pupils should be learning, we say again, is a question for the curriculum-maker. But obviously studies like Latin and mathematics, long organized for instruction in a highly formal manner, are more difficult to adjust to pupil planning than the concrete activities of daily life.

Nevertheless, progress is being made. This will be aided by the growing tendency to prize permanent interests and appreciations quite as much as definite acquirement of knowledge and skill. Mathematical clubs and Latin plays are no longer doubtful. Ancient history, it is found, may actually serve to explain problems of the present. Chemistry has finally reached the kitchen, and physics helps to dispense with the plumber. English grammar aids daily speech, and rhetoric enables one to get his geography lesson better. Little by little, the formal knowledge which the schools have sought to pass on is finding its true place in the scheme of things. No teacher need go through the entire term in any subject with a mere abstract lesson grind. Examples of a better way are at hand.

MORE INCLUSIVE ENTERPRISES

Much of the best modern school life, however, comes under the head of extra-curricular activities, though significantly enough what is extra-curricular today is often curricular tomorrow. Here may be classified the school play, the school newspaper, athletic and other clubs, auditorium programs, playground organizations, community service, and many more.

All of these offer the opportunity primarily for doing things rather than learning how others have done them, though that is by no means barred. Since grading and promotion are not usually involved, teachers are less solicitous as to whether their charges attain what some one has aptly termed "examinable minds" and seek rather to help them do some concrete thing well. The result is probably a better balance between abstract learning and motor control than we have had, plus a tremendous accession of social experience that is beyond price. Those of us who look back to the old literary society as the supreme educational opportunity of our college days know how to estimate what these latest developments mean.

At present only a selected few are permitted to direct the extra-curricular activities of a school. Too often even they are otherwise sufficiently occupied and feel the new duties a burden. But yearly the connection between the freer outside activities and the more circumscribed doings of the classroom becomes closer and closer. Ultimately one will be but the extension of the other and all teachers will take part. The effect upon classroom work promises to be salutary. There is a world of difference between doing things and merely talking about doing them. Extra-curricular activities bid fair to enable us to judge more wisely what the effects of our handiwork really are.

I once had the pleasure of helping to plan and conduct a school festival in which about four thousand persons participated. The entire membership of three elementary schools, a high school, and a normal college was involved. Each group had its representatives on the executive committee and thus had a hand in shaping the affair. All the preparations were made as part of regular class work. Departments collaborated as they had never thought of doing before. Art was, of course, everywhere — designing, supplying color schemes, selecting materials, harmonizing the ensemble. But science and mathematics found place also; music and English obviously. As for household arts, the schools on the grounds would fain supply refreshment for the visiting schools and food must be prepared and served. So each made his contribution. Here was a complex school community bringing all its resources to bear upon a common interest. The instance serves to illustrate the superb possibilities of coöperation and organized endeavor which are bound up in the project idea. Certainly the daily tasks of the pupils took on new meanings when brought into vital relation with a worthy social enterprise. It is safe to guess, moreover, even though you cannot prove, that more was learned during the period dominated by the festival than ordinarily.

DISCUSSION

1. A teacher who has always had a rather formal type of lessons wishes to change to the Project Method of teaching history. How could she begin? By what steps could she complete the change?

2. Many projects have failed because children have started out without knowing where they were going or how they were to travel. How can the teacher meet her obligations to see that they start on the right track and keep on it?

3. Read the Hansel and Gretel project of this book. What regular school subjects were brought into play through the enterprise that started in a music-appreciation lesson? Does any of this work seem to you dragged in for its own sake?

4. In teaching the following subjects, what should the schools take as their aims? Arithmetic, composition, spelling, grammar, hygiene, history, geography, science, art.

5. How are the laws of learning followed by the Project Method?

Selected References

BONSER, FREDERICK G. *The Elementary School Curriculum,* Chapters IX–XVII and Appendix.

Suggestions as to how the project idea may be applied to the various school subjects, particularly the practical arts.

COLLINGS, ELLSWORTH. *An Experiment with a Project Curriculum.*

A full account of a four years' experiment, with measurements of results.

CUMMINS, ROBERT. "Safe Approaches to the Project Method." *Journal of Educational Method,* Vol. III, No. 3, pages 105–108, November, 1923; Vol. III, No. 5, pages 206–210, January, 1924.

FREELAND, GEORGE E. *Modern Elementary School Practice.*

Pass over the definitions and notice the examples.

WELLS, MARGARET E. *A Project Curriculum.*

An account of inclusive projects in the first three grades, the results of which were not measured but were analyzed.

WILSON, GUY M., and WILSON, HARRY B. *The Motivation of School Work.*

This book appeared before the Project Method was much discussed, but it contains many fruitful suggestions which project teachers can use.

CHAPTER TEN

Dangers and Difficulties

The Project Method is not a cure-all, a magician's wand, a substitute for brains. Its value depends upon the soundness of the philosophy of life which its interpreters hold, and upon the technical skill and good common sense with which it is applied. Its use does not render a course of study unnecessary but instead more truly indispensable than before. It is not opposed to the employment of objective measurements (rather the opposite), though it undoubtedly tends to modify the character of those measurements, just as it tends to modify both the content and the form of the course of study. It does not imply the abolition of textbooks, though here again it does influence their construction as well as their selection and particularly their use. It is not dependent upon special equipment nor yet independent of equipment. The more you have to work with, the more you can do. On the other hand, the more limited your conditions are, the more sorely you need the full coöperation and assistance of the pupils.

So many have formed misconceptions and made snap judgments as to what the Project Method really is, and so many fail to appreciate the dangers and difficulties which beset one in the development of a new conception and a new practice, that it seems best to discuss briefly a few of them. Limitations of space obviously forbid going into details. I may at least, however, suggest some of the ways in which the project teacher should be on guard.

THE DANGER OF "LAISSEZ FAIRE"

First, let us observe that the project idea should not be interpreted as a doctrine of *laissez faire.* The fact that the project teacher invites the pupils to assume a large measure of responsibility does not mean that she turns the school over to them. Both the community and the individual are to be served. The school is intended to provide a selected and controlled environment. If it were not so, the education of the children might as well be left to the more or less accidental ministrations of other agencies. Besides, children do not normally wish to avoid the companionship and direction of their elders. They seek these. "We have so much better time when Father and Mother go along," they say. Certainly the younger ones do. They readily exhaust their own resources. Only young people who have been spoiled seek to escape the company of their elders. Of course they always — and properly — resent being crudely and tyrannically bossed and ordered about.

Why any one should suppose that serious-minded students of education would advocate procedures directly contrary to common sense and common experience, it is difficult to see. Perhaps it is because we have been accustomed to regard the school as artificial, as a formal thing-in-itself, unrelated to the rest of life. In such a view any vagary might seem possible.

No, the project teacher plans! Since he relies but little on a cut-and-dried routine, he must plan exceedingly well. The difference is not that he has no plans but that his plans are of another kind. In a single phrase, he plans in order that his pupils may plan. Instead of handing out the problem, he not only seeks to discover it, but he considers whether the pupils can also discover it, whether doing so will be the best possible use of their time, and how in that case he may provide the necessary conditions.

One of the simplest illustrations of this may be cited from geography. A common practice has been to tell the pupils to study a certain portion of the book with — perhaps — the purpose of finding the answer to an important question — say, why Belgium is so densely populated. In that case the pupils would read and perhaps fix in mind the facts presented. The project teacher, however, knowing that the pupils cannot always travel "personally directed," will be likely to let the pupils find out for themselves what question the geographer is seeking to raise and answer. He will be likely also to stimulate the pupils to evaluate the answer and to add other facts if they can. He will do all this, not because the pupils enjoy doing it, though he has no objections to their enjoying their work, but because they can learn to find and solve problems only by finding and solving them, not by having it always done for them.

This example will seem to some persons trivial. It is certainly not Bolshevistic, but it does, nevertheless, mark an advance over the prevailing use of textbooks at the present time. Those to whom such a procedure has become a commonplace are certainly not in the majority. The principle involved, moreover, is of exceedingly far-reaching importance.

Nothing could be farther from the truth, then, than that the project idea means catering to the passing whims of children. It is arbitrary rule which is inclined periodically to relax and pamper. Even a czar gets weary of the exercise of authority. Sympathetic guidance, on the other hand, requires a constructive program. This the Project Method implies. *The project teacher leads the pupils to plan to do the things they ought to do.*

AS TO SOCIALIZING THE RECITATION

Since the technique of teaching has long been identified in America with the technique of the recitation, no wonder need be expressed that the Project Method has been thought of as a way of conducting the recitation and therefore as, in fact, merely the socialized recitation masquerading under another name. The two may of course be so defined as to merge. No one who has followed these chapters, however, can fail to see that there are important differences.

In the first place, the Project Method is vastly more than a method of the recitation. Its principles apply to the management of the school as a whole, to the extra-classroom activities, and to the lives of the pupils as well as to the work of the teacher. And we have heard relatively quite too much about how the teacher should comport himself and quite too little of the responses of the pupils. As for the term *recitation*, it has served its day and had better be replaced by such an expression as *class meeting*.

A more important consideration is the fact that the socialized recitation has become in many schools merely a formula. Put a pupil in the teacher's place and presto! you have socialized the recitation. By way of example may be mentioned the instance of a class in current events. The teacher had a chair in the corner and was constructively absent. A boy called for a report and asked a question. A long wrangle followed, with no outcome in sight. The teacher, unhappy over the poor showing the pupils were making, began to scold the little chairman, who, of course, became more confused in consequence. Finally the teacher summarily removed him from office and assumed command.

The eighth grade is pretty early to begin practice teaching! Certainly a poor teacher can hardly be expected to develop that good understanding of common purposes and that hearty spirit of coöperation in which real socialization consists. A pupil chairman is clearly in place in the club meeting or in certain phases of the course in civics, but not when the group is dealing with ordinary lessons. If the Project Method should fall heir to certain doubtful practices which have marred attempts at socialization in the school, it would be a pity. A little straight thinking will prevent this from happening.

ORGANIZATION AND DRILL

Permit me to emphasize what has already been said about the "follow through." Only by making an uncharitable rather than a fair interpretation of the Project Method may one arrive at the conclusion that it is opposed to thoroughness. Indeed, the available evidence favors the opposite view. Project pupils make the highest records. Besides, mastery is the very groundwork of satisfaction. It is a strange perversion of our knowledge of childhood to assume that serious effort must always be forced from the outside.

The point is that the pupils are to perfect their organization of knowledge themselves after the raw material of experience has been assembled, rather than always attempt to take over a ready-made, often too mature and exhaustive, organization prepared by adults. In a word, they reach a purposeful organization in due time instead of memorizing a formal one prematurely. The actual amount of information so organized will be much less than has been common in the books; the amount really understood will be much more.

Certain writers have done well to call attention to the danger of reviving the old doctrine of formal discipline, now happily moribund, under the guise of the project idea. Learning is without doubt relatively specific. The interests, initiative, application, and other qualities which pupils display in project work in the various school subjects will not of themselves transfer to all other phases of the pupils' lives. The problem is, of course, to provide for a wide range of typical experiences of the worthy sort and to see that these are entered into completely.

For the attainment of full control, for habituation or skill, repetition of the typical experiences is necessary — more repetition, indeed, than is now commonly provided. Much of this, in the present state of our courses of study, especially in the case of expression through language and other mediums, will consist in sheer practice, that is, drill. The practice need not, however, be merely formal. The skill attained should be connected in the pupils' minds with the purposes it is to serve — should spring from these, in fact. And what is almost equally significant, the methods followed and the measures of results used should be appreciated by the pupils; they should drill intelligently.

This applies to a much wider range of attainments than have customarily been thought of as to be reached by means of drill. Methods of gathering geographic data, of thinking out a problem, of getting the point of view of a poem, of planting a garden, are to be mastered by practice quite as truly as handwriting or addition. Simply because the latter lend themselves to an unvarying procedure which can easily be set going, they have been called drills. All such classifications are more or less misleading. Learning is really all habit-forming and the same laws apply throughout. The project teacher will not omit drill, that is, the practice necessary to control; but he will not feel that he must become a mere taskmaster whenever definite attainments are to be reached. He will enlist the active purposes of the pupils.

THE COURSE OF STUDY

A description of the kind of course of study which we must have as an aid to project teaching is too ambitious an undertaking for this place. It is apparent that the course in any subject must be as clear and explicit with regard to the results to be aimed at as it is possible to make it. The greater freedom which must be allowed to the individual project teacher makes this imperative. He must be able to check up frequently by means of the course so that the growth which the pupils should make in a given semester may surely be enabled. The project teacher has no reason to be afraid of specific objectives, if only they are reasonable. He should welcome them.

The practice of stating these in terms of knowledges, skills, and attitudes, which is consistently followed in Berkeley, California, and elsewhere, is to be commended. The more we know as to the abilities to be cultivated, the more skillful our methods may become.

The Berkeley courses have another feature especially worthy of commendation, namely, the description and illustration of the types of activities through which the desired ends can most surely be reached. Avoiding the attempt to prescribe the method for each step in the course, the compilers offer a wealth of concrete suggestions as to the possibilities. The term *project* is used in a more limited sense than in this book, but the point we are making is that courses for project teachers should be constructed on these lines.

CONCLUSION

The Project Method, we have seen, is currently defined in two ways: either as a method or technique of distinctly limited application, such as that of directing the making of some tangible object; or as a relatively inclusive synthesis of current educational concepts, of which purposeful experience and group coöperation are the most important. In this sense it applies to the principles and the procedures involved in setting up the conditions favorable to learning in the pursuit of ends. Such learning we believe to be of the widest and deepest sort and the most lasting. The project idea commends itself to us, therefore, not because it makes school work easy, but because it calls out to the fullest extent possible the energies of the pupils, brings their whole intelligence into play, and tends to develop ideals of method. In a word, it gives promise of enabling the school the more perfectly to fulfill its function.

The rôle of the project teacher is more varied and in one sense more difficult than ordinarily. On the other hand it is more grateful, more conducive of continued self-improvement, and more in harmony with the genius of American institutions. Success in it should be measured by criteria appropriate to the ends in view and the economy with which these are attained. The range of projects possible is as wide as that of the worthy purposes into which the pupils may enter. These may pertain to the embodiment of an idea in concrete form, the solving of an intellectual problem, the attainment of a specified degree of knowledge, power, or skill, or the enjoyment of some æsthetic or other experience. Reports of such projects in all of the school subjects have already been made. Nevertheless, few teachers are entitled to claim that all the school work of their pupils now consists of projects. Probably not all of school life should be dominated by enterprises. There is a place for a "wise passivity." One should float as well as paddle. But the pupils will profit from taking a more responsible part in the activities of the school, and the teacher who has grasped the project idea will find a multitude of opportunities for them to do this.

He will not, however, impose upon the pupils more responsibility than they can well bear. He will plan and direct, insist upon thoroughness, and make no excuses as to tangible results. For if the thing can be done at all, it can be done with the help of the pupils more surely than against their indifference or active opposition. That is good common sense and it is also good pedagogy.

DISCUSSION

1. What are the essential qualities of citizenship? Show how children may grow in these qualities through practice.

2. How should a teacher measure the success of a certain project in regard to the following: the course of study, methods of work, knowledge gained, applications made, attitudes acquired, time spent?

3. What can a teacher do to make children more conscious of their methods of work and more eager to improve them?

4. Cite some instance in which "the knowledges, skills, and attitudes" developing through a project "become such that they are turned to account by the group in just and intelligent control of situations."

5. What sort of examination would a project-method teacher give at the end of a term?

PART TWO

SAMPLE PROJECTS

CHAPTER ELEVEN

The Selection of Projects

SOME WAYS OF SELECTING WORTH-WHILE PROJECTS

A question of much concern to the teacher lies in the choosing of projects for class work. He fears that he ought not to set them himself, and he doubts the advisability of following the leads sometimes set by the children. At times he cannot think of any that are satisfactory, and at times he finds that the children do not seem to know what they would like to do. How shall he choose between this project and that project? He can test the value of a project by carefully answering this question in regard to it: What growth is coming to the children through this project? If the children were to select all of the projects, much would be omitted that seems desirable for education, and some things would be included that do not make for good citizenship. If the teacher were to set all of the projects, many of them would remain his projects, and they would be accepted by the children as required tasks. Better results will come if the teacher very carefully studies the interests and powers of a particular group of children, gives them a chance to set the project, but is ready to set one himself when there is danger of waste or undesirable tendencies or when their projects fail to lead on to further activity.

The children of a second-grade class were given a period in which they might work as they pleased. They seemed bewildered, but one boy finally said that he would like to make a hammer. He did so. The next day all the children in the class wished to make hammers. The teacher thought she must not interfere, and the manufacture of hammers continued for two weeks. These children needed experience in project setting. They did not know what they could make with the materials supplied, and they did not know how to use the tools very skillfully. This was a time for the teacher to step in to prevent a waste of time and energy by leading the children to see possibilities in the materials and to create a situation that would call for a somewhat larger project.

The teacher will find it necessary to decide whether this project or that project is more worth while. A project may be suggested by the children, or it may be suggested by the teacher; but it will not be of any great value to a particular group of children unless that particular group accepts it as a means of satisfying some purpose that they really feel. A project so accepted by the children would not be worth while unless it gave opportunities for initiative, brought growth in knowledge, skill, or habits, and led on to further activity.

Steps in the Project Method. Steps in the Project Method are purposing, planning, executing, and judging. The small boy of the wheelbarrow (page 3) felt the need for a wheelbarrow. He planned the making of one. He hunted up a wheel, boxes, and pieces of wood; he went to work with saw, hammer, and nails. He weighed the values of the materials, and judged the result of his efforts. In all of these steps he was guided by his purpose, the desire for a wheelbarrow. Through his work he learned several things, and he learned them well because the laws of learning were followed in the process.

Whether we name our teaching method Project Method or not, we can and should see that none of these steps are slighted. Outside of school all of us are deciding matters and gaining knowledge by purposing, planning, executing, and judging; we cannot expect to prepare children for doing it unless we give them experience in doing it.

Some dangers and difficulties. At a recent meeting of the Elementary Section of the Alumni Association of Teachers College, " Dangers and Difficulties in the Project Method " was a topic discussed by Professors Kilpatrick, Bagley, and Bonser. Some of the dangers suggested were: less permanent retention, less transfer, less organization of knowledge, an underestimate of the need and value of control and guidance of children, and too much attention to the passing interests of children. As means to overcome these dangers, the following were proposed: an adequate scholarship, a better understanding of and regard for the principles of democracy, a better conception of project teaching, and a more adequate technique.

If you were to ask a group of teachers what the difficulties of this method are, you would get this answer, "Large classes and a lack of equipment." All of us have heard teachers say, " The Project Method is all right for small classes; but it can't be used in the public schools because the classes are too large, and the necessary equipment and materials are not furnished." Today no one has to travel very far to find it being used in public schools. If the purpose is real to the children, they will find materials; and they will manage with very little equipment. If a teacher will give a little careful thought to the matter of materials, she will find that much can be provided without expense. Some of the dangers lie in these facts: teachers think they are using the method when they set projects in order to bring in certain subject matter; they fail to step in where needed; they fail to see and use the opportunities offered by the work; and they begin the work on too large a scale.

Free periods in school. To learn a little more about the interests and purposes of our children, we gave them some free periods. All the teachers were urged to leave the children a little more free; three classes, first grade, second grade, and third grade, had a regular free period, as carefully considered as any other period of the day. Each of these rooms was supplied with some lumber, a small workbench, a vise, two saws, hammers, a brace and bit, and a plane. From our regular supplies each room was furnished with water-color paints, cardboard, stick-printing sets, cloth, needles, thread, and clay. As requests came for them, we added plasticine, small cans of oil paint, shellac, wood stain, paintbrushes, small looms, and games.

We believe that growth comes from these free periods, but we feel that we should like to have proof that it does. In order to judge fairly the worth of this work and the growth from it, we kept a record in each room of what each child did each day. We started a second record of the opportunities that the work offers for real number work, real drawing, real spelling, and reading for a purpose. These records have not been kept long enough to make a summary of them valuable. They do show one thing, however, that may prove a weakness, namely, too many individual projects. They show that several of the children were working at the same thing, and this seems to suggest that children need experience in project setting.

In spite of the large number of individual projects, some excellent group work was done. Groups of the first-grade children worked together to make a rug for their little playhouse. A table and a dish cupboard for this playhouse were made by groups. The second-grade boys worked together to make and paint some racks for their lumber and unfinished work. They worked together to make some cases for their little store. The third grade as a group worked on properties for their assembly program. Some of the individual projects that appeared to be best were a bookcase, a crib, a toy wagon, a chair strong enough for a child to sit on, a bird house, a playhouse as a Christmas present for a small sister, and some clothes for dolls.

The following list of what the second grade was doing at one period will give an idea of the character of the work of the free period:

1.	Working on tool box for the room	2
2.	Making clay bananas for their store	3
3.	Making log cabin for sand table	3
4.	Cutting paper for a mast for boat	1
5.	Looking at magazines	1
6.	Preparing lumber for boat	1
7.	Making horse reins	2

8.	Making toy bicycles	1
9.	Making sword handle	1
10.	Knitting doll's scarf	2
11.	Making tassel for chair	1
12.	Making needle book	1
13.	Painting doll's crib for sister's Christmas present	1
14.	Hemming sheet for doll's crib	1
15.	Making centerpiece for doll's table	1
16.	Practicing sewing in order to sew for doll	1
17.	Making doll's dish closet	1
18.	Making loom for doll's tam o' shanter	1

The constructive type of project. Many teachers think of the Project Method as including only the first type described in Chapter VII, the constructive type. A class that was looking into Greek life and customs in order to know how to talk and dress in their little play was learning history by the Project Method. Another class that searched all the books they could get hold of to settle a disputed question about the animals of the Yellowstone Park, was learning much geography by the Project Method. Some second-grade children who wished to send post cards to a little classmate in the hospital worked hard to address these cards, and they learned some spelling and some penmanship by the Project Method. When some children who wished to be able to play store drilled themselves on the number combinations so that they could add the amount of the purchases and make change, they learned arithmetic by the Project Method.

Sometimes the teacher cannot plan a project that covers the geography and history that he feels must be covered, but the children can help plan their lessons around big questions. They can work to find facts to help answer a question, and the teacher can help them to judge these facts as aids in answering that question. They will have done some purposing, planning, and judging, and the teacher will be on the track leading to the Project Method.

The use of books in the Project Method. Textbooks play a less active part in teaching by the Project Method than by other methods. More books are needed, and different books are needed. The school textbooks alone will not answer the purpose. In geography more books that deal with nature study and general science will be required. Books that tell more about people and their work should be at hand. History requires biography, more general history, and more historical material along many lines. Literature demands more books for appreciation and more current reading matter. Books should not have a less important place, but other sources should have more attention than they formerly did.

The aim of the work. In all this work the aim must be growth for the children through doing and thinking, and teachers must keep upon the track by continually testing the work by the measure, *Growth through thinking and doing.* This was the chief criterion employed in choosing the sample projects which are described in succeeding chapters.

CHAPTER TWELVE

First-Grade Projects

1. EUGENE FIELD FOR APPRECIATION

Situation. One morning the teacher of the first grade placed a picture of the Rock-a-By Lady on the table where the children were accustomed to gather before school in order to look at the attractive books kept there for their use. This picture showed the Rock-a-By Lady as a beautiful woman holding her finger to her lips for silence so that the many sleeping babies all about her might enjoy the dreams that she had brought them.

The children forgot the books that morning because they tried to understand the babies and the lady of the picture. They asked each other questions, and they came to the teacher with questions.

Purpose. The teacher had placed the picture on the table, hoping that it would arouse interest that would carry over into the poems of Eugene Field. Her purpose was a desire to get an appreciation of his poetry.

When the teacher had answered the children's questions about the picture, she asked them if they would like to hear a poem about the Rock-a-By Lady. One boy said: "I have that story at home in one of my books. May I bring it? Will you read it out of my book?" The teacher promised to do so; and when the poem was read, there was a general request from the children to learn it so that they might tell it to their mothers.

The teacher's purpose throughout the work on this and other poems remained the same. The children had several purposes which they set and accomplished after they had learned " Rock-a-By Lady." These purposes included the learning of two other poems, the making of a book of the three poems with pictures to illustrate them, the learning of some lullabies, the furnishing of a Eugene Field study in their playhouse, and the making of a set of dolls to represent the collection of dolls kept in the poet's study.

Planning, executing, and judging. In talks with the children about the poem " Rock-a-By Lady," the teacher helped them to understand that stories may be told in pictures, poems, or songs. She showed them what made this a poem. As they worked to learn the poem, she told them something about the man who had written it, and she read them several of his poems.

The children asked to learn " Wynken, Blynken, and Nod " and " The Night Wind." The boy who brought his book containing " Rock-a-By Lady " offered to lend it to their little library, and the children took great delight in trying to read the poem from the book. They said that they wished they had their other poems in a book. When the teacher asked if they would like to make such a book, they were delighted, wished to begin it at once, and asked if they might make some pictures for it.

The pose work they were having in drawing was applied in pictures showing the lady " with poppies that hung from her head to her feet," "the fishermen three," and the terrors of the Night Wind. Each child decided how he would like to draw his pictures. When all of them were done, they were placed on the bulletin board. The children told what they liked about them, and how some might be made better. One picture showed the wooden shoe in the sky, and the children laughed about it until the child who had made the picture explained that the poem said, " Then down from the skies came the wooden shoe."

As the teacher told the children about the life of Eugene Field, she showed them pictures of his home and his little children. They seemed to be especially pleased with a picture of his study which showed his bookcases, his worktable, and his collection of dolls. They showed this picture to all visitors, and one day somebody asked if they might make their playhouse into a Eugene Field study. When they were asked what would have to be done to the playhouse to make such a study, they decided that the rug, table, and chairs then in it were all right for a study, but the dish cupboard would have to be changed into a bookcase. The playhouse had never been papered. They decided that this must be done and that curtains must be made.

Many kinds of wall paper were brought in, and their colors and designs were considered. A blue oatmeal paper was selected and hung upon the walls of the playhouse. Much of the measuring was done by the children, and all the pasting was done by them. The father of one of the boys was a paper hanger; this boy took charge and taught the children and the teacher several things about paper hanging.

Curtains of cheesecloth were made by some of the

The playhouse in which the children wished to make a Eugene Field study.

children. They measured the length, and under the direction of the teacher planned for hems. Six little girls hemmed the curtains. Each child made a stick-printing design for their decoration. From the entire set one was chosen, and blue and rose were selected for its colors. Using a paper measure, some of the children stenciled the design on the curtains; and none of the other furnishings gave the children quite so much satisfaction as the finished curtains did.

In free periods some of the children had made small rag dolls. They asked if they might dress these for the Eugene Field collection. The picture of his library had shown a little about the dress of the dolls that he had collected in many foreign countries. Dolls that some of them had seen and costumes that all had seen in assembly periods gave them more ideas.

With the guidance of the teacher, they dressed a French doll, a Dutch doll, a Japanese doll, an Italian doll, an Eskimo doll, and several others.

Knowledge, power, attitude, or skill acquired through the project. The Eugene Field book which the boy loaned the children's library contained several attractive things that they wanted to know about, and their desire to learn to read was increased. The poems that the teacher read to them strengthened the desire.

The paper measure used for stenciling the curtain design and the measuring for the wall paper taught them something of the use of a ruler and yardstick, and gave them several number concepts.

They gained some appreciation of pose drawing when they wished to represent three sitting seamen, and a lady walking toward you with her poppies; and their pictures would have been a credit to a higher grade.

They searched several drawing books to find designs for curtains, discovering several things about the repetition and spacing of designs.

They were led to think about the best color for the curtain design and for a little vase they wanted for the table. They gained a bit of appreciation of color harmony.

Our victrola records of lullabies brought them increased pleasure after they had talked about and learned two of Eugene Field's lullabies, and with a will they started out to learn the song, "Sugar-Plum Tree."

The dressing of the dolls brought other children to their minds. The teacher used her opportunity to put these foreign children before them as their little neighbors.

When the study was completed, they declared it "too nice" to use. They said that they would like to move their library books in there so that they might sit and read in the Eugene Field study. The teacher encouraged them to move in, and the little talk she gave them about the care of such a room found ready workers who learned several things about good housekeeping.

Some children asked their parents for Eugene Field books; and these parents reported that they were re-enjoying Eugene Field as they read his poems to the children who were reciting "Rock-a-By Lady" and "Wynken, Blynken, and Nod" many times a day.

Teacher: Mildred Ayres
Time: Five months

2. MOTHER GOOSE'S HEALTH PARTY

Situation. The classes of the Union Street School took turns in providing a program for the Friday morning assemblies. Sometimes the entire class took part in the program, and sometimes a few children were chosen to act for the class. Sometimes the program was a musical one, sometimes a dance or a drill formed the principal feature. Sometimes children read stories, and sometimes they told stories to the other children. Tableaux, charades, games, talks, dramatization, were forms of entertainment chosen by the children. Each class provided two programs during the year; and as these assemblies were very popular with the children, they often furnished purposes for excellent project work.

Purpose. In hygiene lessons one of the first-grade classes had been using a little Mother Goose book printed by the Metropolitan Life Insurance Company. The health rimes and pictures of this book delighted the children, and they could pick out many words that they knew. The teacher read the rimes to them, and they memorized them as they talked about and dramatized the health lessons the book taught.

It was the turn of this class to provide a program for the assembly. The teacher suggested that they recite and dramatize the rimes as they had been doing in the room. The class accepted this suggestion with enthusiasm, just as it probably would have accepted a different suggestion; but it soon changed her plans for the program into something quite different from what was in her mind at the start.

Planning, executing, and judging. The first thing the children wished to talk about was the costumes, for they considered the "dressing up" a very important part of these programs. They were soon led to see that it was necessary to decide which rimes they should act before they could settle the question of costumes.

They chose the rimes they wished to play in a few moments. They seemed to be guided in their choice by the amount of action in the subject matter of the rimes.

They had quite different ideas about the costuming; and some of these differed decidedly from the teacher's ideas, but later pleased the audience very much. They brought some copies of "Mother Goose" from home to show pictures of costumes they liked; they asked for some costumes that they had seen other

Dr. Wise and Mother Goose.

classes use in the assembly; and they wanted some that no one had ever seen. It took several books and some discussion to convince them that Mother Goose is not the woman who appears in pointed hat, riding on a broomstick. Their reading books told them about the wise owl; and they wanted an owl head for "the doctor wise who does advise fresh air, good food, and lots of sleep." Their Wee Willie Winkie carried an alarm clock instead of a candle. They decided that only country children would go for pails of water; and they dressed Jack in overalls and a big straw hat, and Jill in an apron and sunbonnet. Their "old lady who lived all her life on good food and drink" must wear glasses and a shawl and must sit in a rocking-chair, busy with her knitting.

When the children played the rimes, they wanted to say, " I am the old woman who lives in a shoe " and " I am the little girl who had a little curl " instead of " There was an old woman who lived in a shoe " and " There was a little girl." By this time, the children could follow the rimes in the books, and the teacher told them that they could change the words to " I am " instead of " There was." She led the children to make the changes as far as they could, and she helped when they could not do it. The changed poem about the good little girl read:

I am the little girl
Who has a little curl
In the middle of my forehead.
When I chew my food,
I feel very, very good;
When I swallow it whole, I feel horrid.

When they began to practice playing the rimes for the assembly program, they found that they needed several pieces of furniture as properties. Some one suggested that they turn the playhouse, which they had in one corner of the classroom, into Mother Goose's home, and that they play their rimes there. This plan was readily accepted by all; and they added the furniture from school or home as the action required it. The placing and arranging of the furniture and other properties were managed entirely by the children.

All the children learned and played the rimes, and then chose for the final program the ones they thought best acted the different characters.

When they were ready to practice on the assembly hall platform, it was necessary to make some changes

The little girl who felt horrid when she swallowed her food whole.

in the properties and the acting. The children planned the arrangement of the stage, the order of the rimes, and the entrances and exits. They had become accustomed to playing the rimes in their playhouse so their first move was to reproduce the playhouse on the platform; but as this gave them much more room for acting, they asked for furnishings they could not have before.

When the curtain went up for their entertainment, a fireplace, a cupboard, and a semicircle of kindergarten chairs stood at the back of the stage. In the center was a small table set for four; at one side sat Mother Goose, on the other the old woman "who kept healthy and strong on good food and drink." Behind her and near the outside of the platform sat the cobbler making his "strong and roomy shoes." The empty chairs were waiting for the guests who were to come to Mother Goose's party.

The children decided in what order the guests were to arrive, and that, after they had introduced themselves by playing and reciting their rimes, they should sit in the kindergarten chairs until all had gathered. All the children thought Mother Goose should speak first; but the little book gave no rime for her. When the teacher asked them what they wished Mother Goose to say, they decided that she should tell who she was, and that the people who were coming to the party were her children who knew how to keep well. The teacher made this rime for them:

I'm old Mother Goose, and I've come here today
To show you my children, who are happy and gay,
For each one knows just how to keep well;
And if you listen, their secrets they'll tell.

The wise doctor was the first guest; and he advised, "Fresh air, good food, and lots of sleep." The old woman "who lived in a shoe and had so many children she knew just what to do" followed with three of her children. Next the cobbler, who had been working busily on his shoes, introduced himself by saying:

Shoe the horse and
Shoe the mare;
But shoe the growing feet with care.

Mother Hubbard came next with four children, whom she seated at the table. She went to her cupboard to get " food wholesome and good," for this cupboard " was dusted with care and no flies were there." In a similar manner, Good Little Girl, Jack Sprat, Jack and Jill, Mary Mary, Tommy Tinker, Diller-a-dollar, and Wee Willie Winkie arrived, introduced themselves and took their places in the semicircle.

When all were seated, Mother Goose invited her guests to play a game; and all joined in a new version of the Mulberry Bush that they had been having as one of their physical training games. This version showed the way to take a bath, clean the teeth, brush the hair, and to eat oatmeal.

Knowledge, power, attitude, or skill acquired through the project. During this work, some health lessons received emphasis in a way that fixed them in the children's minds. Prominent among them were these:

1. Fresh air, good food, and plenty of sleep help to keep boys and girls well and strong.
2. Food must be clean.
3. Food must be carefully chewed.

The rimes and the talks about them gave excellent opportunities for teaching every topic in our hygiene course of study.

The attractive pictures and the interesting rimes of the little books proved a strong incentive for learning to read, and the children went to work to study out the words. Their vocabularies were enlarged by several additions.

The rimes and the ways to dramatize them furnished subjects for some good language periods in which there were many chances for the children to think and judge.

They had a little practice in standing before an audience, in speaking to an audience, and in speaking slowly and distinctly so that every person in the audience could hear.

Each child assumed responsibility for a share in an undertaking which he wished to be very successful. Each one cared for his own properties, and each one felt that he must be ready at the right moment for his entrance.

They had some experience in the simple organization of subject matter, properties, and procedure.

They worked together for a common purpose. They worked with others and for others. They led, and they followed. They gained a bit along the line of good habits for moral social conduct.

Teacher: Marie Petty
Time: Six weeks

3. "SAFETY FIRST" FROM THE SAND TABLE

Situation. One morning a little girl in a first grade brought five or six paper weights to her classroom. These paper weights were in the form of "Don't Park Here" signs. They were about five inches high, and their brass standards and red letters pleased the children, who could read the words after a little help.

Purpose. In a talk about such signs, the children asked if they might use them as the real ones were used on Main Street. An explanation of this request showed that they desired to represent Main Street in the sand table or on the floor.

Planning, executing, and judging. The question, "What shall we put in Main Street?" brought these suggestions: sidewalks, trolley tracks, train tracks, a train, a trolley car, stores, people, automobiles, and wagons. Several other things were added later. Among them were trolley wires, train gates, a gateman, a policeman, a clock, street signs, and a house.

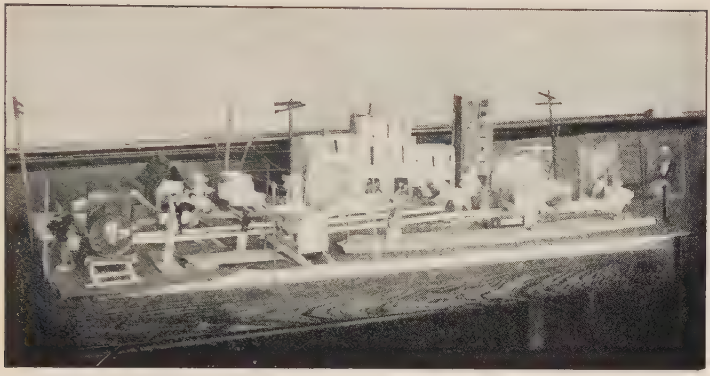
The question, "Of what shall we make these things?" was followed by as many suggestions as the first question. The children promptly brought from home many pasteboard boxes for stores, a station, an engine, cars, automobiles, and wagons. Milk-bottle tops were brought for wheels and cigar boxes for car tracks and poles.

The children decided that the sidewalk was the thing to make first because they wished to place the "Don't Park Here" signs in position. They said sidewalks must stand higher than the road, and they tried to build them of box lids. These made uneven sidewalks, which they discarded. Folded paper was tried next, but this was not firm enough to please them. One boy said that his father worked in a paper mill where he could get heavy cardboard for the walk. The next day this boy said that his father wished to know just how much cardboard was needed. The class used a yardstick and a ruler to find the required length and width.

While they were waiting for the sidewalk, each child went to work to make something seen on Main Street. One boy made the car tracks by cutting the wood of the cigar boxes into narrow strips. A group of boys made a freight train whose black engine and loaded cars delighted the class. The black and white train gates of another boy were considered almost perfect. Some excellent trucks and a milk wagon were the contributions of other children. Rectangular boxes in which holes had been cut for windows and doors made very satisfactory stores and a theater. A good idea of proportion was shown by one of the girls in her choice of a box for the railroad station and in the making of it.

The children had been using plasticine in school; and when the question of people for Main Street came up for consideration, they suggested making them of plasticine. They tried this but did not like the results because the figures would not stand erect and because it was very difficult to dress them. Some of the children had seen clothespin dolls, and they wished to try to make some clothespin people. Their Main Street was soon crowded with gayly dressed men and women. A blue policeman stood in the proper place, and children crossed the street in the proper place. Some of the boys made little standards that held the dressed clothespins erect.

When the train gates were put in place, the teacher led a little talk about the use of these gates; and she made the most of her opportunity to impress upon the minds of the children that lowered gates are for their safety and must be respected. As they placed their people on the sidewalks and crosswalks, they talked about the right place to cross a street and the need to look up and down the street before crossing. Their policeman helped them to understand the work that officer does for them and the reasons why all must obey his commands.



Main Street, Hackensack, New Jersey.

Every morning one or two children had something to tell about other things noticed the day before on Main Street. The stores had names and numbers, and they wanted to put names and numbers on their stores. They examined the numbering on Main Street and on their own streets and discovered that it went from one side to the other side.

After a month's work on this project, it was necessary for the class to leave it for a while because they were very busy preparing for an assembly program which required considerable handwork. They decided it would be better to pack away in boxes for safe-keeping the stores, the people, and all the other things.

When they unpacked the material and began to put it in place, they wished to make improvements in some things. The car tracks did not please them, and they thought the trolley poles and wires did not look as strong as they should. They corrected these things and found much satisfaction in the changes. They had been looking at Main Street very carefully, and they wished to add a clock, a fire hydrant, street signs, names on the trolley cars, and a sign for the news stand at the station. Their first clock had to be changed because, as one came up the street, it was ten o'clock; and as one went down, it was five o'clock. Their street signs and trolley signs were well done, and they were placed correctly.

One day some one announced that Main Street needed cleaning; and when they had cleaned it, they talked about the work of the street cleaning department of Hackensack and what boys and girls can do to help keep their streets clean.

Knowledge, power, attitude, or skill acquired through the project. This sand-table Main Street helped the teacher to emphasize these important facts of hygiene and citizenship:

Train gates are lowered to protect boys and girls, who must not run by them.

The policeman guides and guards the people, and all must obey him.

Boys and girls must look before crossing the street.

We should cross the street at the crosswalks.

The men of the street cleaning department work to keep the streets clean for the health of the people. Every one should do his part to help in this work. All rubbish should be placed in the boxes made for it.

The fire department protects our homes and lives. We can do some things to help.

The signs for the cars, streets, and stores helped to make the children understand the value of spelling, and set them to studying it from all the signs they found on Main Street.

Their desire to have good printing for the signs seemed to add much interest to their work in writing as well as in printing.

They used a yardstick and ruler for the first time; And as they used them to satisfy a need, they saw reason in the use of those tools.

All of them tried to make a clockface; and as they did so, the teacher taught them the use of the hour hand and something of the use of the second hand.

As the children worked to build this street, a little of the city's care for its people and a little of their responsibility to the city was made clear to them. An effort was made to fix some high civic ideals. The working together for a common end offered many opportunities for real civic training.

Teacher: Claribel Wells
Time: Three months

CHAPTER THIRTEEN

SECOND-GRADE PROJECTS

1. A FRUIT STORE

Situation. The second grade had a little grocery store in one corner of the classroom. The janitor had made a counter and some shelves for the children; and they had brought from home cereal, tea, coffee, and cooky boxes. The Model Store of Educational Foundations had sent us various dummies to add to our stock. When the children had marked the prices on the articles and arranged them to their satisfaction on the shelves, they had taken turns during arithmetic periods as clerk, cashier, or customer.

Purpose. One day the teacher asked the children if they would like to add a fruit store to their grocery store, and the class showed a decided readiness to accept this piece of work as a very pleasant task.

Planning, executing, and judging. In language periods they talked about fruit stores and the fruit departments of grocery stores. They listed the fruits that could be purchased in Hackensack, and decided that they wished to have pears, apples, bananas, plums, oranges, lemons, cucumbers, and lima beans in their fruit department.

They considered ways of making these fruits and decided to use clay for all but the cucumbers and lima beans. These, they thought, would look more natural if made of green crêpe paper and stuffed with cotton batting.

The grocery store with its new fruit stock.

They brought fruit from home to serve as models and went to work with clay to shape the different kinds. They worked for several days to make what they thought would be enough of each variety and then decided to paint them. Their paint boxes held only red, yellow, and black, so they had to mix colors. The first children ready to paint experimented and learned how to get purple, orange, brown, and green; and they told the other children the proper combinations. When a pear, apple, or orange was finished, the class decided whether it was good enough for the store.

Patterns for the cucumbers and lima beans were cut from newspapers. When the patterns were considered satisfactory, they were used to cut the fruit shapes from the green crêpe paper. The children pasted the edges together and stuffed them as they had seen their mothers do sofa pillows.

The sand table was used as a storehouse for the fruit while it was being made. When they had a quantity that was considered sufficient, the question of a place for it in the store arose. The next question was, " Where do grocery stores keep their fruit? " Its answer was, " In crates tipped on end to show the fruit." This talk led two boys to offer to bring egg crates, which arrived the next morning. Some other boys nailed two short legs and two long ones to these crates to make them tip up. Four boys experimented with partitions to separate the different kinds of fruit. This was a rather difficult piece of work, but the lessons learned on the first box through trial and error brought very satisfactory results on the second box. The completed tipped-up boxes were much admired because they looked " just like the real stores," and they brought an immediate demand for tissue paper to wrap the fruit in " just like the store." Tissue papers from real fruit from real stores were brought to wrap about the clay fruit, and they made it look so natural that it deceived several visitors.

If it were possible to increase the interest in playing store, it was increased by the addition of the fruit department. All customers added fruit to their lists of purchases. Clerks, cashiers, and customers saw the need of practice on the number 12 in order to use intelligently dozen, half dozen, and a dozen and a half. The longer lists of purchases made the total amounts of purchases larger, making necessary paper coins of larger denominations than they had been using. The store was closed for a few days of drill on addition and subtraction facts so that clerks and cashiers would be properly prepared for their duties.

Some parents called to see the store that they were hearing so much about at home; and when the teacher asked the children if they would like to make little books to tell their fathers and mothers about their fruit store, she found a mind set that helped to bring very good results. Sheets of drawing paper were folded and fastened together to form a book of eight pages about five inches by six inches. In simple sentences of his own construction, each child told what he had done to help make the store; and he drew crayola pictures of the fruit that he had made. He made some sort of design for the cover and pasted cut paper letters on it to tell the title. When the books were completed, their very proud owners carried them home to show something of their writing, spelling, drawing, and printing, as well as to tell something about their store.

Knowledge, power, attitude, or skill acquired through the project. The planning of the fruit and the crates, and the making of the books offered many opportunities for live oral language lessons. As the children were led to judge the worth of this plan and that plan, each had a chance to express his own ideas and to hear and discuss the ideas of others.

As they modeled the fruit, they learned several things about modeling; they also learned how fruit grew, where it grew, and how it came to them.

They learned to mix colors, and they learned to see colors because they were eager to have their fruit look right.

Buying and selling at the store gave real values to the dozen and half dozen, pound and half pound. Their desire to be clerk or cashier gave a strong incentive to their drill work on number combinations. They handled toy money, added the amounts of purchases, and made change as it is done in the stores; and by so doing, they saw meaning in column addition and in subtraction. They learned how to be courteous clerks and courteous customers.

They ruled lines one inch apart on the pages of their books for their writing. In learning how to rule straight lines, they learned how to use the ruler as a measure. The boys who worked on the partitions had more practice in the use of the ruler, and they saw the need of exact measurements.

Each child decided what he wished to say in his book, and he saw that he needed help in writing it. The teacher made the most of this chance for teaching something of simple sentence structure. She led the children to see that capital letters began and periods ended the statements. They gained some appreciation of variety in sentence structure from hearing the different ways of telling how the children had made pears or lima beans. They had a reason for knowing how to make a capital *S* and how to spell the word *orange;* and lessons were planned to meet these needs.

The drawing course of study called for cut letters. The title for the cover of the book gave a purpose for cut letters, which proved to be very pleasing to many of the children.

They worked together for a good fruit store, and they worked hard for its success. As they worked, they helped each other; and they took help from each other. They recognized good work and good leaders and seemed to appreciate them.

Teacher: Marjorie Anderson
Time: Three months

2. A BIRTHDAY PARTY

Situation. One of the second grades was to entertain the other grades of the school in the assembly hall on the seventeenth of February.

Within the last two or three weeks several children in this class had had birthday parties. Many of their classmates had attended these parties, and birthday parties were in high favor.

Purpose. The teacher asked the children what they would like to do for their assembly program. Some one immediately said, " Play birthday party." The entire class promptly and unanimously voted " Yes."

Planning, executing, and judging. The teacher did not see how a birthday party would make a very pleasing program for the audience. She asked the children how they would play such a party. These suggestions came quickly from different parts of the room: " Have a girl in a white dress sitting on the platform "; " Let some children come and give her packages "; " She should open them and say, ' Thank you ' "; " Then play games "; " Then have ice cream "; " Have the people go home."

The teacher told the children that they might play birthday party before school to see what they could do with it.

The first difficulty they met was in letting the other children know what was going to happen. They managed this skillfully by having the girl who was sitting on the platform talk about her birthday.

The children called February the birthday month because of the great men who were born in that month. The teacher suggested that they try to bring the names of these men into their conversation at the party. They introduced Washington and Lincoln very well. The teacher helped them with Longfellow. They suggested Valentine Day and Candlemas Day also. The teacher had told them something about these days, and in their play they reproduced what she had told them.

Their dramatization was free. The speeches were changed and supplemented many times.

They chose a game that had been played in the classroom. This was a phonic guessing game; and when they gave the play, the audience very much wished to join the game. They said that there was always more than one game at a party, and for a second one they wished to dramatize a story. The teacher suggested that they choose a story from their reading books and start plans for dramatization. They began the work at once and later they selected as actors for the assembly entertainment the ones who had played the parts best at rehearsals. They arranged kindergarten chairs in a circle for the party, and they had those children who were to make the longest speeches sit so that they faced the audience.

An outline of the play as they acted it at the last rehearsal is given here:

DOROTHY'S BIRTHDAY PARTY

DOROTHY: I am glad that today is my birthday because there are so many great birthdays this month. I am going to have a party, and I have invited ever so many of my little friends. I am going to have a cake with seven candles. Oh, I am so happy!

(*Enter Vera and Catherine.*)

VERA: Dorothy, we heard that today was your birthday, so we thought we would come to see you.

DOROTHY: Yes, today is my birthday and I am so happy. I want you to stay to my party.

VERA: I just love birthday parties. I had mine last June.

CATHERINE: I always have a birthday party, and we have so much fun playing games.

DOROTHY: I think I hear them coming.

(*Enter four boys and thirteen girls.*)

DOROTHY: Come right in. I am so glad you came early. My cousins are here, and they are going to stay to play with us.

CATHERINE: Dorothy, I brought you a Valentine for a present. (*Hands a Valentine to Dorothy.*)

DOROTHY: Thank you, Catherine, for the pretty valentine.

CATHERINE: Valentine was a very old man who lived many years ago. He lived in a land far across the sea. James is going to tell us about Valentine.

(*James tells the story of St. Valentine.*)

HELEN: Dorothy, I brought you a book of Longfellow's poems. You know his birthday is February 27.

DOROTHY: Thank you, Helen, for the pretty book.

HELEN: The poem called "The Children's Hour" is in the book. Longfellow was called the children's poet. Robert, will you read the poem for us?

(*Robert reads the poem.*)

ADELE: I wonder if you know why I brought Dorothy a flag for a present.

VERA: I know. Two great men were born this month, George

Washington on the twenty-second and Abraham Lincoln on the twelfth. They were brave and true men, and our flag means brave and true.

MADELINE: Did you know that February second was Candlemas Day?

JAMES: What is Candlemas Day?

MADELINE: I will tell you. On that day a bear or a woodchuck comes out of its hole to see if he can see his shadow. If he sees his shadow, etc.

DOROTHY: Let us play a game.

CHILDREN: Yes, let's play a game.

VERA: I know a good game. It is called the guessing game.

(*Children guess what is in the room, beginning with various sounds, as fl, floor; sh, shadow; etc.*)

VERA: I am tired of this game. Let us play a new game.

JAMES: Let's play a story. In our reading lesson this morning we read the story of "The Ant and the Mouse."

(*The children plan and dramatize the story, which is in the Aldine Second Reader.*)

The Wedding

MINISTER: Mr. Mouse, do you promise to eat all the bones of the fish?

MR. MOUSE: I do.

MINISTER: Miss Ant, will you promise to eat the rest of the fish?

MISS ANT: I will.

MINISTER: Mr. Mouse, will you promise to eat all the crusts of the bread?

MR. MOUSE: I will.

MINISTER: And Miss Ant, do you promise to eat what is left of the bread?

MISS ANT: I do.

(*The minister asks the bride and groom about peaches, corn, and apples, as above.*)

MINISTER: Mr. Mouse and Miss Ant, as nothing is wasted or lost, I think you can live together and be happy.

(The minister, bridesmaid, and best man congratulate bride and groom — just hand-shaking, no conversation. Guests congratulate bride and groom.

Bride and groom pass off the stage. Guests wave goodby.)

Knowledge, power, attitude, or skill acquired through the project. The play gave these children some excellent practice in organization. They began with disconnected ideas. Through their united efforts they managed to group and arrange the ideas into a little play of satisfactory sequence. There were many chances for initiative and judgment.

They talked together freely and naturally and did not know that the teacher was seeing and using her opportunity to teach them many points of good oral language.

They went back to their reading books many times to settle some disputed points about the story they were dramatizing.

They learned several things about courteous conduct at parties.

Teacher: Grace Westfall
Time: One month

3. POST CARDS AND LETTERS

Situation. A class of second-grade children had read "The Story of Old Gentleman Gay's Thanksgiving Day," and they were trying to see in how many ways they could help some one else as Old Gentleman Gay had done.

A little girl of this class was in an accident, and her leg was broken. She had been sent to the hospital for six weeks.

Purpose. One day when the children were talking about the little girl, a boy said, "Why couldn't we help Martha by sending her post cards?" Several of the children immediately expressed a wish to do this.

Planning, executing, and judging. One boy brought to school a letter he had received from a brother who lived near Niagara Falls. Other children told about cards they had received when they were ill or away from home.

The next day most of the children brought post cards.

Some of them knew a little about addressing cards; others did not know anything about it. After a short talk they decided that the address must tell the name of the person and the place to send the card. Some one volunteered to write *Martha* on the board. With the teacher's help they learned how to write the surname and the rest of the address. *Hackensack Hospital, New Jersey*, and *Martha Buonomo* were not easy words for these children to write. They practiced before school, in school, and at home.

After the addresses were written on the cards, they wished to write messages. They found words that they could not spell. They helped each other, and they came to the teacher for assistance. Some looked up the words in their reading books; others searched the Ayres List to find them.

This room had a little store, which was turned into a post office for a day, and the children took their pennies there to buy stamps.

When the stamps were on the cards, the children carried them to the nearest mail box. The teacher led a little talk about the things that were going to happen to those cards before they were placed in Martha's hands.

Three days later a little girl, who had been to the hospital to visit Martha, told the class how much the cards had pleased her.

The next week the boy who had received a letter from his brother said that he would like to write a letter to Martha. Many of the other children said they would like to do so. The boy brought his Niagara letter, and several other letters appeared the next session. The children asked questions about the date at the top; they learned how to begin a letter.

They talked about what they should tell Martha, and it was decided that they should write about things they knew would be of interest to her. Some told about a walk the class had taken; some wrote about the class activities; others described individual experiences outside school.

Writing the sentences of the body of the letter was hard work for them. Some told the sentences they wished to write, and the class helped them. The sentences were placed on the blackboard, and they talked about capital letters and periods. Their spelling needs differed, and each child had his own list. The sentences were written on practice paper before they were put on letter paper.

They learned how to close the letters and where to write their names. The teacher showed them how to fold the sheet and place it in the envelope. They addressed, stamped, and mailed the letters.

The teacher who had had this class the previous year was ill with diphtheria. They asked if they might write to her and did so. A boy who had moved away wrote to the class, telling about his new school. They answered his letter, telling him about the clay fruit they had made for their grocery store, Martha's accident and the post cards sent to her, and their letters to their former teacher. A boy in the next grade broke his arm; they suggested writing to him, sending him cards and fruit to "help" his idle hours. They brought pennies for the fruit, covered a box with crêpe paper, lined it with paper napkins, and filled it with the fruit bought by a committee of their own choosing. They worked together to write a composite letter to accompany the basket of fruit. Several children wished to send this boy post cards through the mail. Together they planned so that one card should be sent to him on each day of the next two weeks.

Knowledge, power, attitude, or skill acquired through the project. The first letter writing that these children had ever done was connected with a real letter that they wished to write. Every part of the letter had meaning. They wished to continue letter writing, and their letters were interesting because they were writing news to friends.

Capital letters, periods, short sentences, abbreviations, spelling, and good penmanship were necessary for satisfactory letters; and these children voluntarily spent their free time in practice on these tools.

They learned something about the postman and the post office.

They did many things to help each other in this work, and they made Martha's hours at the hospital much happier than they would have been without the letters.

Teacher: Marjorie Anderson
Time: Three months

CHAPTER FOURTEEN

THIRD-GRADE PROJECTS [1]

1. HANSEL AND GRETEL

Situation. During a music period the teacher played some records from the opera "Hansel and Gretel." The children interpreted these selections by telling what the music told them and by acting parts in which they felt the rhythm. The teacher told the children a little about operas and read the story of the opera from which this music had been taken.

Purpose. When the story was finished, the children asked if they might play it in their puppet theater or as an assembly entertainment. Many of them said that they would like to read the story for themselves.

Planning, executing, and judging. The story of Hansel and Gretel was in one of the supplementary readers for the third grade, and the books that they were then reading were put aside so that all might have a chance to read the Hansel and Gretel story.

They found different versions in their school library books and in books at home. They liked the opera story best, but for their dramatization wished to use parts of the story in the reader.

Several periods were spent in free dramatization. They discussed this work and chose the parts that they thought best told the story and gave the most entertainment. They decided that if they were going

---

[1] The report of project work for "Individual Progress in Spelling and Arithmetic" on page 167 will be of interest to third-grade teachers.

Hansel and Gretel.

to play it the same way each time, they would need some sort of guide. As they planned what should happen in each act, the teacher wrote an outline on the board. With the exception of one change, this outline was followed at the final performance.

A boy in the sixth grade loaned the class a book, *Grand Opera at Home*, containing the Hansel and Gretel opera songs. The teacher sang these songs to the children, and they chose the ones they wished to use in their dramatization. The songs were learned by the whole class.

Early in the work of dramatization the children found that they could play part of the first act to the victrola record, " The Dance in the Cottage," which they had tried to interpret before hearing the story. When they heard the songs for this part with the piano accompaniment, they decided it would be better to have these sung. They discovered that the Dream Music, or " Angels' Pantomime," which they had called " soft and sleepy music," was the same as that of the song, " The Evening Prayer." The girls interpreted this music by dancing, but the class decided that angels probably would not dance, so pantomime was used. " The Witch's Ride " was interpreted by the witch in galloping and shouting. The children thought the music sounded as if the witch rose in the air, so they had her go off the stage after galloping around once or twice. Hansel and Gretel made believe that they were watching her in the air until near the end of the record, when she returned to the stage. After pushing the witch into the oven, Hansel and Gretel showed their joy by skipping and twirling hand in hand to the " Waltz " music. The words,

> Hocus, pocus, elder bush,
> Rigid body loosen hush.

were found to fit the first part of " Disenchantment." The gingerbread boys, overjoyed at being released from the enchantment, dropped their cardboard figures and rushed to the oven to take out the baked witch. They formed a ring and skipped around to the rollicking music which ends that selection.

After a number of children had played the story

Gingerbread boys.

and had received suggestions from the class, a temporary cast was chosen. Then some of the children said that they would like to be certain characters, and they were given a chance to try out for the parts. The class decided whether they had done better work than the members of the temporary cast had done.

Every child took some part in the final performance. Fourteen girls were required in the "Angels' Pantomime." There were ten gingerbread boys. Three boys asked to be stage managers, and one wished to announce the play.

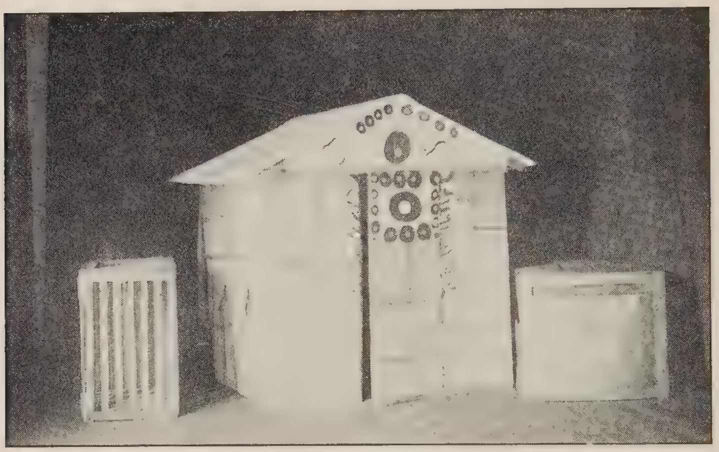
Soon after the dramatization was started, the children said that you could not have a good play without scenery and properties. A list of what they would like to have was written on the board. It included a broom, stools, strawberries, a basket, a cage, an oven, a mossy bank, gingerbread boys, a house, and a baked witch. The strawberries, basket, stools, and mossy bank were very easy to provide from our property room, and the children were sure that they could make all of the other things.

In class discussions plans were made for making a house, an oven, a cage, some gingerbread boys, and a gingerbread witch. It was arranged that the work should be done by groups, and that each child should choose the group in which he wished to work.

The house was considered the most important thing to be made, and the children agreed that it should be a real house out of which the witch could walk. The group that was to work on it asked for some narrow strips of lumber. They used this lumber to make frames about four feet square, and they fitted in one of them an upright piece to which they planned to fasten a door. These frames were to form the four sides of the house. Some of the boys went to the store to purchase hinges for the door and screw hooks and eyes with which they fastened together the four frames. They explained that they wished to fasten the sides in this manner so that the house could be taken apart and easily moved from one place to another. A gable roof offered many difficulties, but they thought no other kind would look right. They measured and sawed the lumber for a carefully planned framework for this roof. In putting it together, they used too many nails, and the wood split. As the boys did not have time to try again, they asked the janitor to help them. They showed him what sort of framework they desired. He followed their directions and showed them how one nail used correctly would work better than many. The completed framework for the roof fitted the other framework and could be lifted on and off by two of the taller boys. The roof, sides, and door were covered with cardboard. When this was tacked to the framework, the house was ready to paint.

At first they decided that they would like to use all of the colors of the spectrum because candy comes in all colors. They were asked to consider the expense and the waste that would be necessary if they were to use only a small amount of many cans of paint. We suggested that they look over the supply of paint on hand to see if they could not represent gingerbread and sugarplums with what we had. They chose brown, green, red, and white, and painted the house in brown squares separated by dark green lines, and trimmed it with red and white sticks and sugarplums. The completed house was voted a great success by every child in the school.

The cage and the oven were made of packing boxes which some of the children had brought for the purpose. The plans of construction were made by the class and carried out by two groups. Narrow strips of wood with two-inch spaces between were used for the sides and door of the cage. The first door was not so good as the rest of the cage, and the class rejected it. The boy whose plan for a door had been chosen was asked to oversee the making of a new door. The back of the oven was left open so that the witch could crawl through and be replaced by the gingerbread witch. The oven door was made of beaver board. The screws that came with the hinges proved to be too heavy for the wood, and they managed this difficulty by using nails which they bent over. The com-



The cage, the gingerbread house, and the oven.

pleted cage was painted brown, and the oven was painted black.

After several unsuccessful attempts a good pattern for a shriveled witch was drawn, cut from cardboard, and painted with brown oak stain. Her pointed hat, cape, and feet were prominent. The children did not consider a third dimension necessary.

One group worked for some time to get satisfactory patterns for the gingerbread boys. Finally sheets of cardboard were spread upon the floor, and the boys who were to take the parts of the gingerbread boys were asked to lie down on them. Members of the groups drew around them. As the sheets of cardboard were not large enough to cut the figures whole, the arms and legs were attached with paper fasteners. A thin piece of wood was tacked to the back to strengthen the arms and to furnish the actors something by which to hold the cardboard figures before them. Simple, straight costumes of cheesecloth were made by the girls who were to be in the "Angels' Pantomime." All necessary measuring was done in an arithmetic period, and the entire class helped to determine the amount of cloth needed by individuals and the amount required for the fourteen costumes. They reckoned the cost of each costume. When the cloth was brought to the classroom, each girl measured off the amount that belonged to her and made her own costume.

The boy who had been chosen to act the part of the father was taken sick, and his doctor said that he must not return to school that term. Some one suggested that the class write letters to him. These letters contained much about their Hansel and Gretel play, and some one asked if they might make some pictures to show him the different scenes. The boy was delighted with these pictures, but the artists enjoyed the making

The costumes made for the "Angels' Pantomime."

quite as much as he did the finished pictures. Requests to make Hansel and Gretel books came immediately after the letters were completed.

The class discussed the making of such a book, its contents, and its covers. They decided that they could tell the whole story with crayola pictures and a few sentences to explain them. Each child decided what pictures he wished to draw. Sentences for these pictures were considered in language work, and each child made sentences to fit his pictures. The spelling lessons consisted of words they wished to use in their sentences. Cover designs and printing for titles became the subject matter of the drawing periods. Some very attractive booklets resulted from this work.

Knowledge, power, attitude, or skill acquired through the project. This project began in a lesson for music appreciation, but it extended into every subject in the curriculum.

The work in the interpretation of music that these children had before and after they knew the story of the opera made them better able to appreciate music. They learned the story of one opera, and operas had a new meaning for them. Some boys that had expressed a dislike for music began to show a decided interest in the music lessons. One of these boys asked if the class could sing other songs from the book of operas.

The free dramatization offered many opportunities for interchange of opinions and for judging the worth of suggestions.

Several versions of the story of Hansel and Gretel were read and reread to see just what should go into each scene. Silent reading had a purpose, and all of the children had some practice in it.

The children studied the spelling of the words they wished to use in writing the statements about the pictures of their books. Some words were used by all of them, and these were taken as class lessons; but individuals had separate lists to fit individual needs.

The penmanship time was spent in practicing the letters and words that were to be written in the statements of the books. Each child worked on his own letters and words.

The planning of scenes and properties filled many oral language periods. Sentences and capital letters received attention in written language lessons, and the actual need gave meaning to them. The letter to the sick actor led the children to write to other sick children, and they wrote excellent letters because they had much of common interest to write about.

Measuring lumber for frames and cloth for costumes, buying hinges, and reckoning the cost of material furnished the subject matter for several arithmetic lessons, whose aim was to give the children power to make intelligent use of numbers in their everyday life.

As the groups worked on the properties, one group consulted another and individuals within the groups. They talked together as people do outside the classroom. They lived and worked together, and learned how to live together by living together.

Teacher: Miriam Gilchrest
Time: Four months

2. A POST OFFICE

Situation. In one of our second-grade rooms there was a little grocery store, and the children who played at store-keeping did not seem to tire of this play.

Purpose. Soon after one class was promoted to the third grade, the children asked if they might have a grocery store in that room. They said that they would like to build it. The teacher suggested that they consider dry-goods stores and drug stores. She suggested that as they had had a store the year before, perhaps they would prefer a post office or a bank, and she asked them to talk it over together for a few days. The next week they reported that the class voted for a post office and that each child wanted a private box.

Planning, executing, and judging. The classroom of this grade was very small, and permission was secured to use a corner of one wing of the assembly hall for the post office. As the assembly hall was across the corridor from this room, the children could conveniently work there.

They examined the corner and planned the placing of the post office. They arranged so that a jut in the wall of the assembly hall helped to form a doorway.

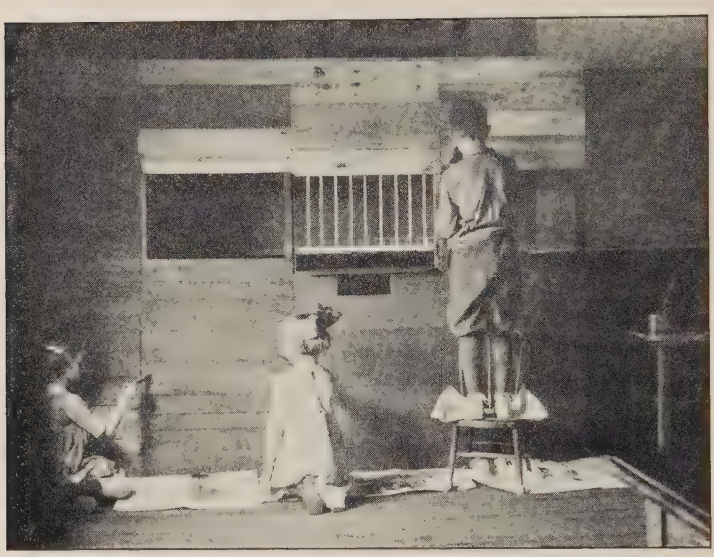
Boards from wooden boxes furnished the lumber for building. In order to protect the plaster walls and slate boards in this corner of the assembly hall, we asked the janitor to build the necessary framework. The children told him how they wished to build their walls and where the doorway and window would be placed.

They visited the Hackensack Post Office to look at it more closely than they had ever done before. After a class discussion, they listed these things as necessary for their post office: a stamp and delivery window, a slot to receive letters, a box to catch the letters dropped through the slot, a shelf for parcel post packages, mail boxes arranged behind glass, numbers on those boxes, and a Post Office sign.

They drew plans to show how they would place the window, slot, and mail boxes. After taking some measurements, they blocked out thirty mail boxes and a window to determine how large spaces they should leave when they nailed the boards that were to form the front of the post office.

They had some doweling in their room, and they suggested that this would make good rods for the window. They measured and sawed this doweling but had to have a little help to get it in place. They cut a slot in one of the boards before they nailed the board in place. A cigar box was fastened on the inside to catch the letters. Several drawing periods were spent on cut paper letters, to get some that the children thought would be good enough for the sign.

The mail boxes proved to be the most difficult part. Several plans were suggested and discussed. Two plans were tried out, but they were not satisfactory. The teacher told the children how rods divided the mail boxes of her post office. They saw possibilities in doweling, and this was used successfully. The children measured the open spaces left for the mail boxes, reckoned the number of feet of doweling needed, and brought to the office a note telling the dimensions of



Painting the post office.

the pieces of glass wanted and the required amount of doweling.

Each child painted a small part of the woodwork of the completed post office.

Each child was assigned a mail box, and each one had a turn as mail clerk. The mail was sorted each session before school.

At first the children of this room wrote letters to their classmates. When other children saw the post office and heard about the letters, they wrote to their friends in this room. After these letters were answered, entire classes wrote letters to this class or other classes.

A large number of unused post cards from all parts of the country were given to us. A fifth-grade class, which was taking an imaginary trip across the United

The mail is open.

States, chose cards that pictured places of interest to them and wrote on these cards as if they were visiting there. They secured a list of the names of the pupils in the third grade, and each pupil received one of these cards and answered it. All the children entered into the spirit of the play and enjoyed it thoroughly. The other third grade wrote cards to this third grade and received post cards in reply.

Stamps from old letters and cards were brought from home to use in the post office. Real letter paper and envelopes were furnished by the school.

As they worked on their post office and wrote the letters, the teacher introduced these subjects for discussion: the work of post offices all over the country, the Hackensack Post Office, the duties of its employees, the collection and delivery of mail, the Dead Letter Office, and the parcel post.

Knowledge, power, attitude, or skill acquired through the project. These children gained a better appreciation of our post offices and the work they do for all of the people of the world.

They learned how to address and stamp a letter correctly. They understood why the stamp should go in the upper right-hand corner and why the address should be written with great care. They acquired skill in writing salutations and complimentary closings. They discovered that a good letter tells about things of interest to the sender and the receiver.

The letters furnished the subject matter of the spelling and the penmanship lessons.

Every child in the class had some practice in measuring, sawing, nailing, and painting; and his skill in the use of the tools required for such work was increased.

At first a few children did not receive nearly so many letters as the others did, but two or three children noticed this and took care to see that there were letters in their boxes. Their example led several other children to think about the pleasure of their neighbors.

Teacher: Alberta Dodge
Time: Four months

CHAPTER FIFTEEN

FOURTH-GRADE PROJECTS[1]

1. A HEALTH POSTER

Situation. The school nurse brought us a set of posters for the bulletin board in our bathroom. These posters were published by the New Jersey Tuberculosis League, and each showed a boy and his dog following the advice of some health rule given in rime on the poster.

In a hygiene lesson one of the fourth-grade teachers showed the set to her children, told them how they were to be used, and asked them to choose the one that they thought should be displayed first.

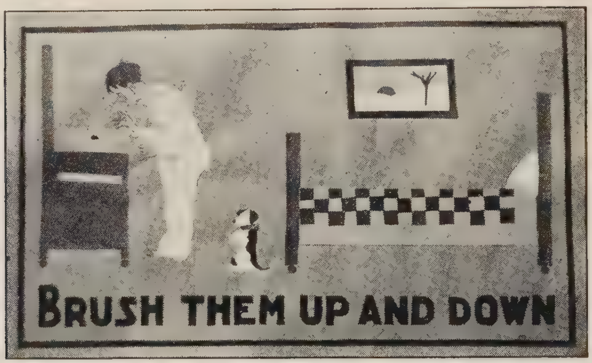
By an almost unanimous vote, the class chose a poster showing the boy brushing his teeth before going to bed. This vote for the poster was followed immediately by quite severe criticisms of its picture and its rime. These criticisms were well deserved, for the picture showed the boy spilling the water from his glass in a very careless manner, and the poem said:

> Brush 'em clean.
> Brush 'em right.
> That's the way
> To keep 'em right.

Purpose. The teacher asked the children who criticized the poster for suggestions in regard to changes that

---

[1] The report of project work for "Individual Progress in Spelling and Arithmetic" on page 167 will be of interest to fourth-grade teachers.


BRUSH THEM UP AND DOWN

A health poster.

might have made it a better poster. Several suggestions were given, and one child asked if the class could make over the poster for the bathroom. It was not necessary to ask the children if they accepted this piece of work as their project; because, before any question could be put, the eyes, hands, and voices of all of them said, "Yes! Yes! Yes!"

Planning, executing, and judging. When the teacher asked what they would have to do to make a poster to take the place of the one they were discarding, they listed the following:

1. Make a rime.
2. Cut out letters to make the rime.
3. Get a background.
4. Make a boy, a dog, a bed, and a bureau to paste on the background.

Three language lessons were spent in making rimes. After several had been composed and their merits in regard to language and hygiene had been discussed, the following one was chosen by the children for their poster:

> "Be sure to brush them up and down,"
> Say the dentists in our town.

In one drawing lesson the size of the background was determined; in others the arrangement of the picture and the rime were discussed. When each child had blocked out in crayola his own ideas about the picture, all of the plans were examined and discussed by the class. The one they considered best was taken as a model for the poster. After they had handled and tried several other combinations, orange and blue were chosen as its main colors. Newspaper patterns of all of the figures to appear in the poster were cut out; their merits were discussed, and the best ones were traced on colored paper to cut out.

A little talk by the teacher about the center of interest led one boy to bring in some other posters to show what he thought was the center of interest. The next day many of the children brought posters and advertisements for the same purpose. When the letters of the rime and the figures of the picture were put in place, the children decided that things looked crowded; and they were asked by the teacher to consider what they could take out without diminishing the value of the poster. They decided that the rime would have to be cut to " Brush them up and down," but they were not very happy about this until some one said, " Oh, well, that's the part that tells people how to brush their teeth." A group of careful workers chosen by the children did the necessary pasting.

Knowledge, power, attitude, or skill acquired through the project. For a week the children were much interested in the making of the rimes. They worked on them at home and before school; they found words that they could not spell, and they found that they did not know where to put capitals. The teacher used this readiness and helped them to discover that the first word in a line of poetry begins with a capital. She put away the spelling books to let them make the spelling lists from their needs. She taught them how to write the direct quotation that they had put in their rime. She used to good advantage her opportunity for teaching much about the teeth, besides the reason for brushing them up and down. Many linear measurements were required, and these were made by the children who found that they needed practice in the use of a ruler and were ready for that practice. The choosing of the colors for their poster offered an opportunity for a review of complementary colors and helped to fix other combinations as well as the one of orange and blue. The center of interest and the balance of colors were made real to the children in the arranging of this picture of their own making.

Teacher: Regina Edwards
Time: One month

2. A PUPPET SHOW

Situation. A parent of one of the sixth-grade boys entertained our school with a Punch and Judy Show. His puppets and puppet theater, which the children knew had been made in Holland, delighted them. The next day one of the third grades began plans for

A puppet theater made by the third grade.

a puppet theater in which they dramatized the George Washington hatchet story.

Purpose. Before the third grade had finished its theater, the children of one of the fourth grades asked if they might make a puppet theater and give a puppet show in the assembly hall.

Planning, executing, and judging. At the teacher's suggestion groups of children visited the third grade to examine its theater and puppets. In language periods the children discussed some points that they had seen and liked, and some that they thought might be improved. They compared this theater with the Punch and Judy theater. They decided that they would like to have their theater differ from both of them in some respects.

Several large wooden boxes were brought in by the boys. A box four feet high and two feet wide was selected as best for their purpose. They stood this box on end with the open side as the back of the theater. For several days they worked hard to find a box just two feet long to stand on top of this one. They succeeded in finding such a box; and when it was placed, they said that their stage was ready.

While they had been getting the theater started, they had been searching for a story to dramatize. They considered some of those in their reading books; they listened to some that classmates brought from home to read to them; and they looked up others in their classroom library. Individuals chose some that required elaborate properties or a large number of characters. Means and ways were considered, and the class voted against these stories. Some one said, "Let's play the Three Bears," and every one agreed that that story was just the thing.

Language periods were used for discussing the scenes and writing the speeches. In drawing periods the stage settings, properties, curtains, and the decorations of the exterior received attention.

The puppet worker, the puppets, and the puppet theater.

They decided to have four acts:

Goldilocks visits the dining room.
The bears return for supper.
Goldilocks lies down to rest.
The bears find the uninvited guest.

They found some plays in their reading books and wished to write their play in the same manner. Under the title "Goldilocks in the Home of the Three Bears," the players were named and described. Each act had its subject and ended with a call for the curtain. Colons were used after the names of the speakers, and parentheses inclosed explanations.

The children spent considerable time and effort on the stage setting for the dining room. The thing they seemed to desire first and most was a plate rail, so they began with the walls for the room. They decided to have light brown oatmeal wall paper, and they asked for real wall paper. The walls were made, and windows with white curtains were added after the plate rail was placed and filled. They asked for clay with which to make porridge bowls. After three bowls that were properly graduated in size were chosen from the entire output of the class, they were shellacked for durability. Three chairs that varied only in size were made from cardboard boxes and painted with brown oak stain. Several tables were made in this way, but none pleased the class. One of the boys came to school one afternoon with a table he had made from a cigar box. It was the right size, and it was very well made. The children recognized its superiority and asked the boy to paint it to match the chairs. When another boy brought a little brown rug that he had woven in third grade, the furnishings of the dining room were complete.

Three beds were made from cardboard boxes and painted white. Many measurements were necessary to get three sizes that would fit the three bears. The bedroom walls were covered with blue oatmeal wall paper. Stiff cardboard was cut to fit the back and two side walls of the stage. The dining-room paper was pasted on one side of this cardboard and the bedroom paper on the other. When the scenes were changed, the cardboards were reversed.

Soon after the children began this work, a new book, *When Mother Lets Us Play*, by Angela Keyes, was added to our school library. This book contained some suggestions for puppet shows, and its cover had a picture of a puppet theater which was decorated with a surface pattern. When the question of decoration for the exterior of their theater came up, the vote for a surface pattern was unanimous. It was decided that the rather rough boxes should be covered with paper or cloth and that some unit of design should be pasted on this to form a surface pattern. After some discussion, strawboard was chosen as the material for covering the boxes. Two periods were spent in talking about and making units for the pattern. Six of the best ones were posted, and the class chose one. Blue and orange were chosen as the colors for the units, which were cut from drawing paper. When the strawboard had been measured and cut to fit the sides of the theater, groups of children drew faint lines as aids in pasting on the units. Each child had a turn in measuring, cutting, and pasting.

Some of the children brought in material for curtains, and several pieces of cloth on hand at school were sent to the room. They chose a piece of tan sateen that nearly matched the strawboard. They said that they would like a better match, and a committee chosen by the class went to the stores with the principal the next day to see what could be found. Samples were brought back to the class, and a perfect match made every one happy. Some of the girls cut and made the curtains. Several boys experimented at home to find a way by which these curtains could be pulled back and forth before the stage. One boy succeeded in getting results that pleased the class. He had made a model of the theater and had hung two small cloth curtains, which were pulled from the rear by cords with white or black buttons at the ends, to show which to pull for raising or lowering the curtains.

When the puppet theater was ready for an assembly production, these children said that they thought they ought to tell the other children how they had made it. They decided that this could be done in three speeches. One speech could tell about deciding to make such a theater and choosing the story for dramatization. The second should describe the making of the stage settings and the exterior decoration. The third ought to explain how the puppets were worked. These speeches were made, and the audience seemed to appreciate them.

The drawing course of study called for a poster, and the children considered a poster a necessary part of their show. One representing the three bears returning home was posted on a hall bulletin board the day before the show, and it proved to be a very good advertisement.

When the children asked to make programs for their parents, who often attended the assembly periods, some one suggested that real programs should be studied so that they might make theirs the right way. A large number of programs arrived the next day, and some very carefully made programs went home to show the parents what they might expect in the coming performance of " The Three Bears."

The class considered four ways of working the puppets, which were made of cardboard. It was decided to make small holes in the back wall of the dining room and the bedroom, and through these holes to work the puppets by the wires fastened to them.

Knowledge, power, attitude, or skill acquired through the project. Many stories of good literature were thoughtfully read in the search for a good one to dramatize in a puppet theater. The children had good practice in silent reading and in oral reading, for they wished to read well the stories of their own choosing. The writing of the play gave them excellent drill in the writing of short declarative and interrogative sentences, and in the use of capital letters, periods, and question marks. They learned a little about the use of the colon and the parenthesis.

The play and the program proved good incentives for spelling and penmanship lessons. Yardsticks, tape measures, and rulers were used many times; and the children's skill in the use of them increased noticeably.

The poster was a poster, not a drawing lesson, for it was to serve its real purpose. Printing for such a poster was real printing and worth doing well.

The dining-room setting was a very pretty study in brown, and the children seemed to appreciate this. The teacher used her opportunity for a talk with them about home and school decoration.

As first planned, the bedroom had pictures on the walls but no windows. The children pointed out this error, and they had a good laugh about it. The hygiene talk that followed made more impression than many others on the same subject had done.

The children wished to know the names of each of the pieces of cloth they examined for curtains. They asked many questions about the texture of the goods, and they learned many facts about the manufacture of cloth. Some of the children had parents who worked in silk mills, and this added interest to the subject.

The decoration of the exterior of the theater was the biggest undertaking in the work. More than a hundred units were required, and only those that were carefully cut and carefully pasted were accepted by the children. Each child made some of the units, and each one felt a responsibility for the success of the whole.

Each member of the class would have liked to be the manager of the puppets or one of the other two workers behind the scenes, but all willingly gave up the desire and asked the ones whom they recognized would be best in these positions to act for them.

Teacher: Frances Hasbrouck
Time: Five months

CHAPTER SIXTEEN

Fifth-Grade Projects

1. A TRIP TO SOUTH AMERICA

Situation. The class had been studying North America. The course of study said that South America should follow. The teacher wished to make that continent and its people as real as possible to the children.

Purpose. The project was set by the teacher. She asked the children if they would like to take a trip to South America. The children replied that such a thing was impossible. When the teacher explained that she meant an imaginary trip, the children were interested. They said that some of it did not have to be imaginary and that they wished to plan for it as if it were to be a real trip.

Planning, executing, and judging. The children decided that they could not visit all of the continent and that they must determine to which of its countries they wished to go. They chose to visit the most important countries, but they did not agree on the importance of the countries. Some were sure that the A B C countries were first in importance; others were sure that they were not. They set a problem for themselves, " What are the most progressive countries of South America? " This question led to another, and that to others. Among the questions were these:

1. Why is northern Brazil not more thickly populated?
2. What makes Buenos Aires such an important city of South America?
3. Why would trade between the United States and South America be valuable?
4. What do we need to do to help increase this?
5. What do we need to do to travel to South America?
6. What is the value of the passport?

To answer these questions, it was necessary to consider the life, industries, soil, and climate of all of the countries. The less important countries were studied to learn why they were not progressive.

After the countries had been studied, the children chose to visit one city and its surrounding territory in each of the most progressive countries. One child decided he would like to visit Quito; but all of the other children chose Rio de Janeiro, Buenos Aires, and Valparaiso.

They decided they must first learn how and where they were to sail. In discussions they said that they should write to steamship companies for information. They consulted papers and magazines to find the addresses of these companies. One boy asked several questions of a man who had recently secured a passage to Europe, and he brought to the class more information. Several steamship companies were selected, and letters were written to them by groups. Answers were received from the companies. These gave rates and information in booklets containing many pictures of the cities the children wished to visit. One boy chose a steamship line that did not go direct from New York but via Liverpool. This made it necessary for him to go second class. Several companies sent charts of their cabin arrangements; the class discussed the advantages of first- and second-class passage and decided which way to go. In arithmetic periods the cost of the trip was computed.

A list of what would be needed on the trip was made. Clothing came first on this list because of climatic changes. They put money second, and they were very much interested in the currency changes necessary.

They considered ways of letting friends at home know their whereabouts and activities. They discussed letters, cablegrams, and diaries. The diary pleased them; they planned to keep individual ones and to put into them things that interested them and would probably interest the people at home.

The diaries were very real to them. No two were alike. They contained descriptions of their arrivals at the steamer, their cabins, the activities on board, the changes of climate, and the harbors. The children described their visits to three cities, the foreign languages, the people, and the industries. They became very much interested in their own diaries and in those of their classmates. They searched our reference library and books and magazines at home for interesting facts for the diaries. The diaries were read in class; their items furnished the subject matter for many geography periods and many questions for further study and discussions.

The fifth-grade course of study called for a study of the home state, New Jersey, as its last topic. The children asked to study New Jersey as they had studied South America.

Knowledge, power, attitude, or skill acquired through the project. These children saw the people of South America as real people and real neighbors of theirs.

They learned the important facts about South America well, and a careful checking-up of the course of study showed that they had studied all of the topics in its outline.

They learned something about using reference books, and they learned something about judging the worth of such books.

Their consideration of steamships, passage, and ports made their trip more interesting, and it gave them a better idea of transportation in general.

They learned how to write business letters through their letters to steamship companies.

The diaries required individual spelling lessons, and some of the spelling periods of each week were devoted to these lists. Certain words were needed by all of the children, and such words were put into class lists. The diaries offered opportunities for practice in writing simple, concise statements.

In arithmetic periods the cost of such a trip was computed, and this required the use of all four of the fundamental processes with dollars and cents. The cost of cablegrams and foreign mail was discussed. The money of the different countries seemed to be of especial interest to the class, and considerable time was given to a consideration of currency. They learned the advantages of travelers checks.

Teacher: Georgina Saunders
Time: Three months

2. INDIVIDUAL PROGRESS IN SPELLING AND ARITHMETIC (THIRD, FOURTH, AND FIFTH GRADES)

Situation. We felt that individual needs did not receive enough attention in our classrooms. A professor from Teachers College told the teachers of our extramural course something of the experimental work being done in Winnetka, Illinois. Our supervising principal visited the schools there and told us more about the work. We had observed some of the individual progress work in spelling at the Horace Mann School.

Purpose. Four of our teachers decided that they would like to try some work that would take care of individual needs in arithmetic and spelling. They outlined the spelling and arithmetic for the remainder of the year. They divided the work into lessons and made charts for keeping the records of each child. When the plan was explained to the children, they wished to start the work at once.

Planning, executing, and judging. The purpose of the teachers was the desire to help individual children. The purpose of the children was to go ahead as rapidly as possible.

The teachers planned the units of progress, prepared the work for each step, and judged both of these by their purpose. The spelling was divided into units by lesson numbers; numbered mimeographed sheets showed the units of work in arithmetic. The children planned their study of the units of work, and independently did their studying of spelling and their working of arithmetical tasks. They judged the value of their studying and of their knowledge by their results.

Enough arithmetic sheets were mimeographed so that each child could have one, and he did his work on the sheet. When one sheet was completed, he started the next one. One teacher dictated the spelling words to some groups before school and to other groups in the spelling period. In one room the children worked in couples and dictated the words. One teacher dictated certain lessons each day, and the children wrote when she came to the right lessons for them.

One teacher used Dennison's stars on her chart to show each unit of the progress; the other teachers extended a line one space farther.

The teachers found that some children could do better work than they had thought possible, that a few had much less power than they had thought, that the arithmetic units were too great, that the spelling units in some grades were too small, and that a very few children did not seem to care to get ahead.

The children found that it did not pay to decide too quickly that they knew all of their spelling words, that they needed to study their multiplication tables, that they could not guess in arithmetic, and that they did not know how to do some of the work.

At the end of the term the children voted that they would like to continue the individual plan. The teachers said that they had found enough of value in it so that they wished to try it again the next year with certain changes that they thought would improve it.

Knowledge, power, attitude, or skill acquired through the project. Through the individual plan the children acquired a better knowledge of the spelling of certain words, and they became more skillful in handling the fundamental processes of arithmetic.

Time and energy were saved by the work because it enabled the children and the teachers to locate and correct difficulties. Better work was done in most cases because the desire to go ahead held the children to concentrated attention.

They learned to know the tools better but not how to use them more intelligently. During the weeks when this drill work was going on, the teachers took care to provide situations that would present the need and value of these subjects and give the children a chance to use them as tools.

Teachers: Lyndell Williams, Georgina Saunders, Frances Hasbrouck, Alberta Dodge
Time: Four months

3. SOME BIG QUESTIONS IN GEOGRAPHY AND HISTORY (FIFTH AND SIXTH GRADES)

Situation. Our teachers have difficulties in finding projects that will cover the work required in geography and history. They try to give their classes some big questions which they think will interest the children and which will bring in the important facts of these subjects. The lessons of one day often suggest subquestions for consideration on the next day. Days, weeks, or months may be required for answering the big questions.

Purpose. Two of the following questions were suggested by the children; the other one was suggested by the teacher.

1. What difficulties did Columbus have in discovering the New World? Fifth grade.
2. Why is Argentina the most progressive country in South America? Fifth grade.
3. What reasons had Sir Joseph Cook for saying that Australia's barometer is set fair? Sixth grade. (This statement was made on the birthday anniversary of Australia.)

Planning, executing, and judging. The teachers were careful to see that the questions were understood by all of the children. Columbus's difficulties did not need much explanation, but a few children did not interpret " most progressive " correctly. Barometers were considered and " is set fair " was translated by the children as " indicates good times ahead."

Sources for facts to help answer these questions were considered and listed. This is the list prepared by the sixth grade:

1. Textbook and its supplement
2. *Literary Digest* (Three copies are provided for this classroom.)
3. *Current Events* (A copy is provided for each child.)
4. School library
5. Public library
6. Reference books in the classroom
7. Books at home
8. A copy of the *National Geographic Magazine* devoted to Australia.

One of the boys volunteered to go to the public library for books. He brought four books to school the next morning:

Burley. *Australian Life in Town and Country*
Carpenter. *Australia*
Gitson. *Wealth of the World's Waste Places*
Wise. *The Commonwealth of Australia*

All three of these classes had library periods in our school library, and in them they were taught how to use reference books. The sixth grade was more skillful in such work because it had had these periods for two years.

The fifth grades made source lists similar to those of the sixth grade, but these lists were not so full. They included reference books in their classrooms, in the school library, and at home.

When the children had collected facts to answer these questions, the facts were stated and discussed in class. Accepted facts were written on the board. The facts as they were worded by the children are given:

Fifth Grade

QUESTION: What difficulties did Columbus have in discovering the New World?

1. The people did not believe, as he did, that the earth was round.
2. He could not get money for ships and supplies. He tried many times and was successful only after many years when he went to the Queen of Spain.
3. He was considered insane.
4. Men did not want to go with him.
5. His sailors became frightened after many weeks on the ocean.
6. They became mutinous.
7. Storms drove him far out of his course.
8. His captain, Gomez, played traitor to him.

Fifth Grade

QUESTION: Why is Argentina the most progressive country in South America?

1. Argentina is in the temperate part of the earth.
2. The crops raised are like those of United States.

3. In the northeast there is plenty of rain; and it is warm enough for the growth of cotton, sugar cane, tobacco, and tropical fruits.
4. There are large wheat fields in the south.
5. Corn and flax are grown in large quantities.
6. Enormous herds of cattle and sheep find pasture in the grazing lands of the west and south.
7. Buenos Aires has important and growing manufacturing industries.
8. Buenos Aires is the chief port and railroad center for the southeastern part of the continent.
9. There are more white people in Argentina than any other country of South America.
10. Every year thousands of Europeans come to make their homes in the grain-growing lands of Argentina.
11. There are more miles of railway in Argentina than in any other South American country.
12. Argentina exports nearly half as much wheat as the United States, mostly to England and France.
13. The climate is just right for active, energetic people.
14. Extensive timber lands are found in the north.
15. Copper and silver mines abound in the west.

Sixth Grade

Question: What reasons had Sir Joseph Cook for saying that Australia's barometer is set fair?

1. Its people are considered equal, and they work together contentedly.
2. Australia has valuable timber.
3. The Australians enjoy their good roads.
4. Australia has pearls.
5. Australia has fine child-labor laws.
6. People own their homes.
7. All the animals have increased and produced better stock.
8. The chief exports of Western Australia are gold, pearls, pearl shell, sandalwood, timber, wool, and skins.
9. Sydney is one of the most important ports of the South Seas.

10. The government successfully controls postal, telegraph, and telephone services in Australia.
11. Australia stands second in respect to the private wealth of its citizens.
12. Chinese immigration has been restricted.
13. Australia's wealth lies in her flocks of sheep.
14. Australia has self-government.
15. Australia is naturally a very rich country.
16. Australia has fine ports.
17. Outdoor work can be carried on all the year around.
18. Australia trades with the world. Great Britain is sending emigrants to develop, populate, and civilize Australia.
19. Australia produces gold, tin, zinc, copper, lead, iron, and endless quantities of coal.
20. Special railroads have been built to export wool.
21. There are no glaciers in Australia.
22. Australia's working conditions are more pleasant than those of any other country in the world.
23. Australia has never yet suffered from a general drought.
24. Australia has never known the miseries of war.
25. Only those men who show real ability can get into office in Australia.
26. Australia is level in surface.

Many facts were given that did not help to answer the questions. The teachers kept the children to the points under consideration by going back to the questions again and again. The children doubted the value of certain statements, and class discussions followed. Some of the children asked for explanations of what they had read, and others explained if they could.

It took many days to answer these questions. Usually the children suggested what the work for the next day should be, but the teachers did not hesitate to direct and advise where they saw the need for such action.

The fifth grade became very much interested in Columbus and asked if they might dramatize his difficulties in assembly. They considered these difficulties the most dramatic:

Columbus' beliefs
Obtaining money
Mutiny on board
Saving the record

After the sixth grade had decided that they had answered their question, the principal asked the children what they had learned about Australia that did not help to answer the question. They gave the following facts, which they considered the most interesting ones they had learned outside the answers to their question:

1. In 1602 a Dutchman discovered a part of Australia and named it New Holland.
2. The first Englishman went to Australia January 26, 1688.
3. The British first occupied Australia in 1788. Sydney, the oldest city in Australia, was founded by Captain Phillips in 1778.
4. Cook's expedition revealed for the first time the presence of wide belts of fertile land in Australia.
5. When the English first went to Australia, they found it inhabited by wild, dark-colored people.
6. Gold in paying quantities was found shortly after 1851.
7. Australia has several salt lakes. The bottom of some of them has not yet been found.
8. Geologists say that the continent of Australia is one of the oldest existing land surfaces, having a good dry land when much of what is now Europe and Asia was still under water.
9. Australia is regular in outline, and is the lowest continent.
10. The central part of Australia is sandy, dry, and hot everywhere.

11. Australia has rivers that flow from the mountains westward through fertile plains.
12. Most of the surface of Australia is composed of granite rock.
13. Australia has many hot springs.
14. Only one per cent of the land is under forest or brush.
15. The water of Australia is not very warm.
16. In the well-watered sections of Australia, vegetation is thick and tangled; and the early settlers cleared the lands with great difficulties.
17. Australia needs more railroads.

Knowledge, power, attitude, or skill acquired through the project. These children learned many facts of geography and history, and they learned them well through organizing and judging them with relation to their value in answering an interesting question.

They did much silent reading, and they gained skill in reading quickly to pick out important facts.

Reference books were tools to help them answer questions. Tables of contents and indexes were tools to help them use the books.

They had much practice in judging the worth of statements; they had some practice in judging the worth of reference material.

The facts that helped to answer the questions were written on the board when they had been stated in a concise manner accepted by the children. This gave them practice in constructing oral and written statements that were short and definite.

They were learning how to study. They accepted and rejected facts. They supplemented. They felt some responsibility for taking initiative and for getting the questions answered. A clearly understood purpose guided them.

Teachers: Irene Cummings, sixth grade; Georgina Saunders, fifth grade; Lyndell Williams, fifth grade
Time: Two or three weeks

CHAPTER SEVENTEEN

Sixth-Grade Projects [1]

1. GEOGRAPHY FROM CURRENT EVENTS

Situation. The recent changes in Europe made our geography textbooks and maps out-of-date. The World War and its results made us feel that the work in geography must do more toward the making of good world citizens. (The project here reported was worked out in 1920–1921.)

Purpose. The need for up-to-date subject matter, and the desire to have the children think of the people of other countries as their neighbors whose common interests unite all the countries of the world, led to the consideration of current events as a means of approach to an intelligent understanding and appreciation of the people of Europe.

After several plans had been discussed and rejected, the teacher and the principal decided to undertake the project, "How much of our course of study in geography can we cover by using current events as a basis?"

When the work was started, the children were very much interested because they were "learning something new about people every day"; and they began to set the questions for the next day's consideration. As the work went on, several pieces of activity in connection with it were proposed by some of them and accepted by the class as worth while.

---

[1] A project in geography for the sixth grade has been given on page 34.

Planning, executing, and judging. We supplied each child in the class with the weekly copies of *Current Events* and a copy of *The Results of the World War* by Brigham and McFarlane. For class use, the following were provided: Reynold's *After the War Atlas*, one subscription to the *Literary Digest*, and maps of New Europe issued by the National Geographic Society, the *Literary Digest*, and the Rand McNally Company.

After we had discussed the many excellent points in the course of study, we made out the following list of things we wished the children to gain through a study of Europe:

1. A better understanding and appreciation of Europe and the people of Europe.
2. An intelligent interest in international affairs.
3. Some understanding of the interdependence of countries.
4. Some knowledge of the cost of the World War in life, property, energy, and money.
5. An interest in current events.
6. A knowledge of selected minimum essential facts.
7. In the selection of minimum essential facts we followed the suggestions of M. E. Branom and W. C. Reavis, and of Professor Whitbeck as given in the Seventeenth Year Book of the Society for the Study of Education.

To check up the data for our project, we made a concise outline of the subject matter suggested by the course of study, so arranged that the teacher could check each topic as the opportunity came for teaching it and reviewing it.

At first the teacher suggested articles in *Current Events* for class reading and discussion. This reading soon led to points wherein the children felt the need for further information so that they might understand what they had read. The next work for the leader was to show them how to get this information from textbooks and reference books. In a short time the children were bringing clippings from home newspapers, and these often furnished the questions for class consideration. Each question considered offered opportunities for planning, executing, and judging by the children.

Many pictures found in newspapers and magazines were brought from home. Groups were chosen to have charge of the bulletin boards. In discussions before school they decided which pictures showed something that applied to the question being considered, and they placed these on the bulletin boards. Other groups filed the clippings in folders for future reference work.

Knowledge, power, attitude, or skill acquired through the project. The desire of the children for further information so that they might understand the news items, and so that they might prove that the statements they made in discussions were correct (or that statements made by others were not correct) prepared them for the teacher's aid in learning how to make intelligent use of textbooks and reference books.

The children kept the copies of *Current Events* and made them into books. After a few weeks they felt the need of something to help them find articles that they had noticed in the first copies. They suggested making an index, began at once to do so, and on each Friday thereafter added the items that the class decided were sufficiently important.

At the end of the term the teacher of the library period, which these children had three times a week, found that they could use an index, a dictionary, and an encyclopedia far better than any other class in the school had been able to do during the two years that she had done this work with the fifth- and sixth-grade classes.

The consideration of the coal strike in England led some child to say that it would be interesting to know what the papers of England were saying about it. Three children who had relatives there immediately offered to write to ask them for papers. These letters were written in language periods, and they were real letters for a real purpose. All of the children handled and discussed the letters. They asked many questions about foreign mail; and they learned something about addressing, stamping, and transporting it. Other children wrote to relatives in France and Italy for newspapers.

At the end of the term 60 per cent of the class were reading their home newspapers regularly, and they were showing a growing interest in the affairs of South America and Asia as well as in those of Europe. Parents told us that their children got the daily papers first, and that they could discuss European affairs with them.

In checking up the data for answering our project, "How much of our course of study in geography can we cover by using current events as a basis?" we found that practically every topic suggested had been covered. These might have been covered in some of the questions considered.

At the end of the term we gave the children a test to see if they could answer certain fact questions which an experienced sixth-grade teacher felt that children should be able to answer after a study of Europe. The class median on the test was 80 per cent. The regular term test for the school system consisted of one question whose purpose was to test habits of work. This test found these children able to use a book, to pick out facts that answer a question, to stick to that question, and to know when they had answered it.

Teachers: Irene Cummings and Sara E. Chase
Time: Five months

2. A PLAY TO SHOW IMPORTANT EVENTS IN HISTORY

Situation. Before the end of the term one of our sixth grades had completed the work outlined in the history course of study.

Purpose. The teacher suggested to the children that they might write a play which would show some of the most important events that they had studied. The idea pleased them.

Planning, executing, and judging. They outlined the subject matter that they had covered and decided that the subject of their play should be "The Steps by Which the United States Grew in Strength." (This work was done in 1923.)

They decided to have four acts which should aim to show how strength was gained through the following events:

The Constitutional Convention
The Civil War

The work of the telephone, railroads, cable lines, and newspapers
The Disarmament Conference

The children worked together for the Constitutional Convention scene. After they had planned it in a general way, they searched every history book that they could get, to find definite particulars of the meetings and quotations from the speeches. They thought all of the thirteen colonies should be represented, and each boy chose the delegate he wished to personate. When they began to rehearse, they became very much interested in the arguments that they were making; they searched for more information so that they might better present the side they had chosen. When the play was given in the assembly hall, some of the speeches were so good that third- and fourth-grade boys applauded them.

In the Civil War act, the children wished to show how strength came through the refusal to let a single state withdraw. They planned that this could be done by having two veterans relate some of their experiences and give their opinions about "union now and forever." The teacher asked all of the children to write out the act. She read some of the best results to the class, and they suggested changes and additions. When they began their rehearsals of this act, some one said that there was not going to be much in their play for the little children of the audience. When they were asked what they could do to improve the play in this respect, they said, "Put some little children in the play." The teacher asked them to talk this idea over together. The next day one of the smallest girls in the class said that she could be a little child who left her book to listen to one of the veterans, her grandfather, as he told his war stories. This plan was satisfactory to all, and some one suggested that her mother call her and the grandfather to dinner to close that act.

In the third act Aunt Sue returned from the Pan-American Exposition. A father, a mother, and two children were sitting in their living room when Aunt Sue arrived. The little girl was singing to her doll. Aunt Sue told about her travels and the things she had seen. In a very skillful but natural manner she brought in the changes that had come to the country through the railroads, telephones, cable lines, and newspapers. She gave the children a chance to get into the conversation. When she told them that she had brought something for them and bent to get it from the bag on the floor, the entire audience stood to get a better view of the presents. The little girl was sent to bed at eight, but she managed to stay up a little longer by securing permission to get her doll to sleep.

The last act showed a restaurant. Two men were reading a newspaper and talking about the Disarmament Conference. In the discussion they spoke of the United States as a world power, and they told in what they thought her strength lay.

When this act was being prepared, the girls, who had had few parts in the play, saw a chance to get in. They said that they could dance to entertain the people in the restaurant. The teacher was a bit shocked, but the girls went on to explain that their costumes could represent the territorial growth of the United States, and that they could join hands at the end to suggest her strong union. One of the girls went to the library for a book of simple dances and drills, and all of them began to plan costumes. The act closed with the drill as they had planned it. Minuet costumes represented the original colonies; farmer uniforms, the Middle West; miner outfits, the West; ukuleles, the Hawaiian Islands; long straight white robes, the Philippines; and fur coats, Alaska. The groups entered in the order of acquisition. When all were in place, they joined hands and moved around in a circle, singing "America, the Beautiful."

Knowledge, power, attitude, or skill acquired through the project. This sixth grade knew more history when the play was completed than any of our other sixth grades had known when they entered the seventh grade. They knew better history.

They acquired greater skill in the use of books; they discovered that history is found in many places besides textbooks.

The speeches gave them practice in oral and written language. The teacher used her opportunity to fix some important points of technique.

They must have gained a better appreciation of the work done by their forefathers, a deeper realization of the country's strength, and a greater regard for her unity.

Teacher: Irene Cummings
Time: Three months

CHAPTER EIGHTEEN

Projects in Special Classes

1. CHECKERBOARDS

Situation. The fifteen children of this class were high-grade subnormal children whose mental ages ranged from seven to nine years.

These children became very much interested in the remarkable chess playing of the nine-year-old Polish boy, Samuel Rzeyewski. They brought to school newspaper reports of his successes and his pictures. They began to use their checkerboard, which had been idle for months.

Purpose. They played checkers before school. In a few days several children wanted the board at the same time. One morning they asked if they might make some checkerboards. Each one desired one of his own. This room was well supplied with tools and materials, and a handwork period was an important part of each day's program. Permission was given for an immediate start on checkerboards.

Planning, executing, and judging. It was necessary to plan very carefully and to move very slowly, for these children became discouraged easily.

They described all of the checkerboards they had ever seen. Some of them went to the Ten Cent Store to examine those for sale there.

They considered materials that could be used as the foundation of the boards. Some chose cardboard; some preferred wood.

All agreed that the size of the checkerboard in the room was right and that they wished to make the dimensions of theirs the same. This meant that the size of the squares on theirs would be the same as those of the classroom board. Many measurements were required. Each child measured with his own ruler, for some of these children can use rulers with one-eighth inch divisions; and some, rulers with half-inch divisions.

Four of the children wished to make folding boards. Two of these were to be made of wood; and one of the boys went to a hardware store to buy the small hinges needed to fasten the halves of the board together. The other two were to be constructed of cardboard, and bookbinding cloth was used as hinging material.

Drawing paper was fastened over the cardboard foundations. Lines to divide the boards into $1\frac{1}{2}$-inch squares were drawn on all of the boards. The wooden ones were painted with oil paint. Some of the others were colored with water paints, and some with crayola. Two of the children cut half of their squares from drawing paper of one color and pasted them on another color.

Most of the checkers were made from doweling. It was not easy to saw off $\frac{3}{4}$-inch lengths of this, and two boys did most of the sawing.

Each child had chosen the colors for his board, and he painted his checkers to match.

One boy could not manage the measuring and the ruling of the squares, but the other fourteen completed their work. Fourteen boards were exhibited to the other children of the school, and the owners were very proud of them. A board was made by the class for the fifteenth boy.

The boards were finished a few days before February fourteenth, when these children were going to have a classroom party. They asked if they might play checkers at the party. The teacher said that they might do so and that they might arrange things for the party just as they would like to have them.

They managed the party much better than we had thought they could. Twelve of their individual tables were pushed together to make one large table, which stood in the center of the room. Paper napkins were used to make a white tablecloth for it, and it was decorated with candy boxes that the boys had made and filled. Three of their tables were placed at one side of the room, and some borrowed tables were placed on the other side. A checkerboard was put on each table.

Some one explained that the plan was to have progressive checkers. The plan pleased all of them, and good players happily sat down with very poor players. At the end of a game two winning players exchanged places. When they were ready to go home that day, they said that it was the best party that they had ever had.

The checkerboards were kept at school for three months, and they were used many times.

Knowledge, power, attitude, or skill acquired through the project. A piece of work, which was a big job to these children, was carried to successful completion. They realized that the results were good, and they gained self-confidence for other undertakings.

They felt better satisfied with themselves and with the world.

The making of the checkerboards furnished a topic of common interest for this class, in which it is difficult to find subjects that interest all the children. Their desire to have good boards made them ready to hear the suggestions of all. They weighed the value of these suggestions, and they were willing to experiment before making final decisions.

They measured, counted, and arranged squares alternately. These were not easy tasks for them; but held by their purpose, they kept at it and tried again and again.

They had good practice in drawing light lines and cutting straight edges.

Accuracy and neatness were necessary for satisfactory results, and they seemed to gain respect for these qualities.

They helped each other, asked advice of others, played with poor players, and in the doing of these things lived together as good citizens.

Teacher: Anna Dolan
Time: Two months

2. THE HACKENSACK BANK

Situation. The Patty Hill blocks have been in constant use since they were placed in this low-grade special classroom, where they are most frequently used for making buildings like those the children have seen in Hackensack. The mental ages of these children ranged from three to seven years.

A new bank building on Main Street had just been completed, and the City National Bank of Hackensack had opened there.

Purpose. One day the children asked if they might use the blocks to build the Hackensack Bank. The next day one of the boys brought to school a calendar that had on it a picture of the City National Bank of Hackensack. The boy said that he had walked into the bank to see how it was built on the inside, and that a man had given the calendar to him. The children found a place to hang it and wished to start building at once.

Planning, executing, and judging. The teacher talked with the children about the purpose of their toy banks and the purpose of real banks. They discussed their fathers' bank books, the work of the men employed in a bank, and the saving of pennies.

The boys built a bank whose exterior resembled the picture on the calendar and whose interior had a deposit window, a window for withdrawals, a safe, and a place to write. The girls made some paper money and some bank books.

When they were ready to open the bank, they chose Don for the banker and Flora for a clerk.

They decided that the bank could not begin business at once because the people had to earn money before they could put it into a bank. They said that they must have a storekeeper, who could sell the things which they had made and sold to him. A store was built and stocked. John asked to be the storekeeper, and he hired Mary for his clerk.

Robert decided to have a peanut stand. Esther and Ethel were chosen as the mothers of two families, and they began at once to arrange their homes in opposite corners of the large classroom. The other members of the class became the children of the two families.

The storekeeper, the clerk, and peanut vender had money to deposit in the bank. The mothers made things to sell to the store, and they saved some of their house money, so they, too, had accounts. The children deposited the pennies that they saved.

For a time everything went well, and then the storekeeper had trouble because Mary did not prove to be a good clerk. He asked the teacher what he could do and decided to discharge her. Ethel said that she would act as clerk and would hire Mary to take care of her home.

After several weeks Don moved out of the school district and was transferred to another school. John wished to buy his position. The teacher explained that bankers did not get positions in that way. The class acted as a Board of Directors and John was chosen president of the bank.

John could not attend to the bank and his store; so it was decided that he must sell or rent the store. Each child made a " For Rent " sign for John, and the best one was hung on the store. Ethel went to the bank to see John about renting the store. He told her that she could have it for $18 a month, $9 to be paid at a time. Ethel did not seem to think that this was just the way to rent a store, and she would not agree to the terms until the teacher had said that it was all right if it was satisfactory to John.

One morning all the prices in the store were lowered. The teacher questioned the storekeeper and

The Hackensack Hospital.

found that they had been changed because the numbers in the A and P Store windows were different that morning. Ethel said, " If we do not come down, people will go somewhere else to buy; and we shall have no money to put into the bank."

Because of illness, the new banker's attendance was irregular. Interest in the bank gradually waned, but it had shown the children the possibilities in the blocks. They now wished to build the Health Center, where some of them had gone to have their teeth filled and their eyes examined, and where they had seen moving picture shows on Saturdays. The boys were told that they might have the blocks for three weeks, and they started at once to build the Health Center. In a few days they gave the girls some tickets for a free moving picture performance at their Health Center. They managed a clever moving picture show. They weighed the dolls, did some dentistry work, and examined eyes.

The girls had a turn at the blocks next, and they made a Five and Ten Cent Store. An epidemic of measles led the boys to build a drug store after the other store had been sold. Hackensack is building a new hospital, and the class is planning to start a hospital soon.

Knowledge, power, attitude, or skill acquired through the project. The representation of these buildings and activities helped the children to understand better the life of their community and to realize something of the relations of one worker to another worker. The planning and handwork that they did together strengthened the feeling of coöperation and interdependence. There were many chances for the teacher to emphasize courtesy and fair play.

The group kept laggards at work to accomplish the desired end, from which all received much satisfaction.

The homes gave the teacher an opportunity to fix a few important facts about good housekeeping. The bank did much more for thrift than any of the teacher's talks on the subject had done. The stores taught some of the children how to do an errand at a store.

Spelling, arithmetic, hygiene, writing, and printing had places in this work. Signs gave a purpose to spelling and printing. Price tags, bank accounts, and making change gave opportunities for real arithmetic. Writing was needed in the stores and in the banks. Hygiene talks had more meaning when connected with your own drug store, your own Health Center, and your own home.

Teacher: Julia De Mott Boss
Time: Five months

CHAPTER NINETEEN

A KINDERGARTEN PROJECT

BANKS FOR THRIFT

Situation. Immediately after thrift stamps were discontinued, the kindergarten teachers noticed that the children were spending more pennies for cheap candy.

Purpose. One morning a little girl brought to the kindergarten fifty empty cardboard spools. These spools were cylinders about two inches high and an inch and a half across. One teacher thought that the spools would make fine banks. When she asked the children if they would like to make some little banks for their pennies, most of them said they would like to do so.

Planning, executing, and judging. The teachers talked with the children about decorating the spools to make them look prettier. They had some books of sample wall papers, whose designs and colors the children much admired. Some one suggested that they could paste pieces of wall paper around the cardboard spools, and this plan seemed to please all of the children. A little discussion and planning led the children to use the narrow borders for covering the cylindrical sides of the spools. These borders did not look right on the top and bottom, and drawing paper in solid colors that matched the borders were used for them. Each child chose his border and matched one of its colors in drawing paper.

With cardboard spools, wall-paper strips, pencils, scissors, and paste, the children were ready to make their banks. Each child placed his spool on the drawing paper, drew around it to make two circles, and cut them out. He pasted one of these on the top and one on the bottom of the spool. Next he measured the length of border needed by putting it around the spool. When this was pasted on, the teacher cut a slot in the top; and the bank was done.

Each child saw his name written on his bank.

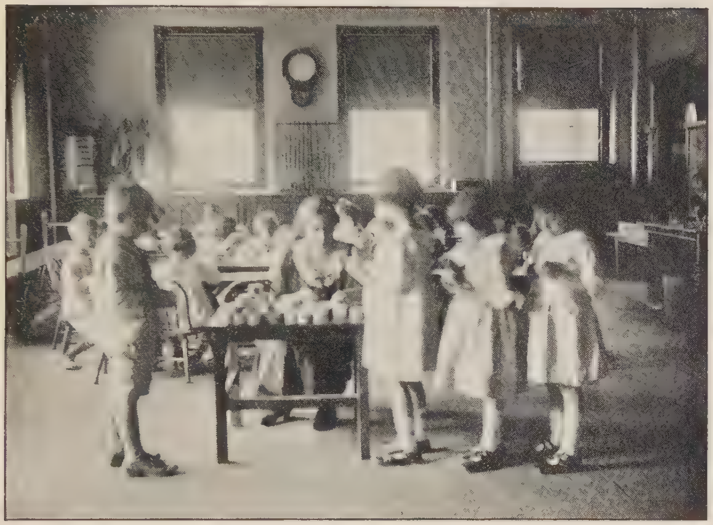
Notices to explain the purpose of the banks were taken home by the children, and the replies showed that the mothers were glad to coöperate in the plan for saving.

Soon after the first deposits were made, a little girl said they ought to have bank books. Some very little books were made by sewing together several folded pieces of paper. The children did the sewing.

Every morning and afternoon the bank was opened for a few moments. The depositors formed in line to drop their pennies into their banks, which were kept in the teachers' safe. As he deposited his money, each child saw the amount of his deposit entered in his bank book. Some of the children wished to take their bank books home after each deposit, and they did so. Others left theirs in the teachers' care.

At the end of the term the banks were opened and the money was counted. Together these children had saved $21.13 in pennies. The largest amount saved by one child was $1.57; the smallest was $.03.

Knowledge, power, attitude, or skill acquired through the project. These banks were a step toward



Depositing pennies in thrift banks.

a habit of saving. The children saw that pennies grew to nickels, dimes, and quarters. They compared the purchasing power of the penny and the quarter. They had learned something about banks and banking.

There were many opportunities for the children to count. They counted pennies, depositors, circles, and leaves for books.

They learned to recognize some of the figures, and they tried to make these on the blackboard. The figures represented values to them, for they had the number concepts from their own pennies.

They saw how their own names looked in writing, and they were curious to know the other names. Some of them learned to recognize several.

They considered the banks very pretty. They worked hard to paste them carefully in order to keep them clean, and they valued their cleanliness.

In matching the colors, they had a little lesson in color harmony that carried over into other work.

They had eaten less cheap candy.

Teachers: Virginia Stinson; Emma Doremus
Time: Four months

CHAPTER TWENTY

PROJECTS BY THE ENTIRE SCHOOL

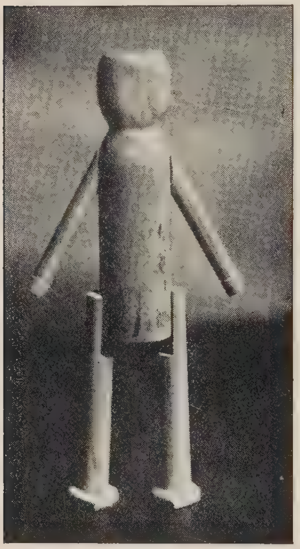
1. DOLLS FOR CHILDREN IN EUROPE

Situation. The Junior Red Cross asked our school to provide some toys for the little children of Europe.

Purpose. We considered three possible plans for providing these toys. One plan was to suggest that the children bring discarded toys; another was to give the older boys an opportunity to make toys in their manual-training periods; and the third was to buy toys with pennies given by the children for that purpose. Each of these plans was unsatisfactory in some respects. We wished to give every child a chance to help, and we wished to have the children work together in class groups. It seemed to us that this might be accomplished if each room dressed one doll and made a bed for it.

Each teacher discussed this fourth plan with her children. All were delighted and at once accepted it as a very pleasant project. They enlarged our plan so that the simple wardrobe we had in mind was extended to include hats, sweaters, kimonos, and furs. Our bed immediately became a complete bedroom set. When they began to make the clothes, they added a trunk as a necessity for each doll. In a few rooms the feeling that the little boys in Europe were being neglected led to the planning of toy automobiles and horse reins.

Planning, executing, and judging. The special class made seventeen small wooden dolls of doweling,



One of the seventeen dolls.

one for each classroom. Faces and shoes were painted on them. They proved to be especially pleasing to the children because they could sit and stand. In each room a name was chosen for the doll, and the conversation on the playground began to center about "our doll Margaret" or "our Dorothy."

When the dolls were named, the children wished to start making their clothes; they wished to bring pieces of cloth from home for these clothes. The teachers talked with them about suitable materials for such little dolls; and in most of the rooms this talk resulted in the bringing of small figured materials, thin materials, narrow ribbons, and narrow laces.

In the sixth grades, the children cut their own patterns. In the other rooms the teachers helped and showed the children how one pattern with slight changes could be used for several garments.

The children worked on the dolls' clothes during sewing periods, industrial art periods, before school, after school, and at home.

Some of the sewing was poorly done at first; but the standard set and accepted required that the sewing should be strong enough so that the little girls could play with the dresses many times, and well enough done in other ways so that they could use it as a model in making other dresses. The children of the kindergarten and the beginning first grade did not sew for their dolls. The teachers made the clothes, following the wishes the children expressed in regard to them. Two high first grades did most creditable work, sewing far better than we had supposed it possible for them to do. The boys of the first three grades sewed with the girls.

While the girls of the fourth, fifth, and sixth grades were sewing, the boys worked on the designs for the furniture, made it, and painted it. The painting proved to be a great pleasure, and the work was very well done. The beds were very satisfactory to all of the children, who seemed to appreciate their strength, proportions, and lines. They had slats, mattresses, sheets, blankets of outing flannel, spreads, and puffs. Each class chose the color for its bed; some of them were white, some maple, some mahogany, and some oak.

The children worked on the dolls for a month. They talked dolls in the rooms, in the yard, and at home. Mothers became interested and sent in garments that they had made for the dolls. Fathers helped some of the boys make furniture at home. The school janitor made a high chair and a cradle for the baby doll.

At the end of the month there were many pieces of cloth left; and at the suggestion of some children, the dress patterns that they had used were inclosed in bundles of the prettiest pieces to go with the dolls to the little girls.

There was a strong feeling throughout the building that they would like to have the children who received the dolls know their names and who had dressed them. They decided to send a letter with each doll. In the upper grades the children working together planned what should be included in the letter. Each child wrote a letter, and the class made a composite letter from the individual ones. In the low grades the children dictated to the teacher the messages they wished to send. This is the letter of one first grade:

Hackensack, New Jersey
United States of America

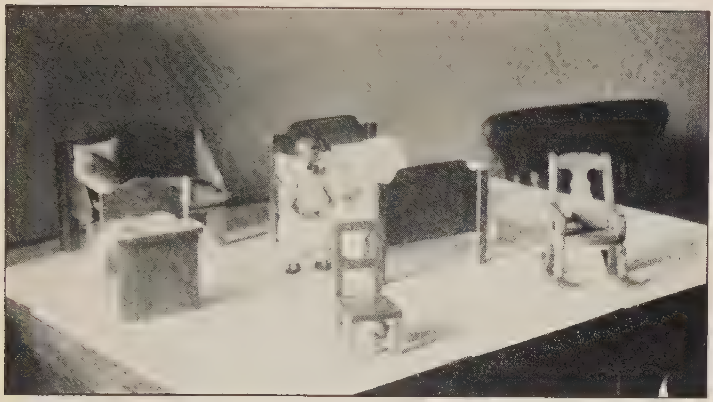
Dear Little Girl,

We are sending you a doll. Her name is Rosie. Keep her nice. We are sending a bed with her. She came to you on a boat. We made her in the Hackensack schools. When the doll gets there, you may play with her. You will be glad to have her. We hope you will take good care of Rosie. We are sending you this doll because you have nothing to play with.

Goodby, dear Little Girl. We hope that you are well and that you will keep Rosie a long time.

From the children in the First Grade of Union Street School.

Many children asked to see the outfits of the dolls in the other rooms, and we promised an exhibition of all the dolls. We decided that this could be arranged by placing the dolls and the furniture on kindergarten tables, and by hanging above the tables sheets of paper containing their wardrobes. A card above each doll could tell its name and the class that had prepared its outfit. The children were told that it would be necessary to pin the garments to sheets of paper before they were sent to the exhibition. They were shown various colors and were allowed to choose the one on which they



The fifth-grade doll, with her furniture.

thought their garments would look best. When this was done, they chose the colors for the name card; and in most cases the choice of color was good.

The exhibition showed most of the dolls dressed as little girls. One was a Red Cross nurse with a correct uniform, including dress, apron, cap, cape, and wrist watch; one, a bride with veil and orange blossoms; one, a boy; and one, a baby in a long dress. Some of the dolls stood, some sat in their chairs, and one sat astride a horse made for one of the neglected boys. The things in the exhibition that especially pleased the children were the baby doll and its carriage, the bride, the boy doll's roller-coaster, and a bureau with scarf, pincushion, tiny candle, and cologne bottle.

Knowledge, power, attitude, or skill acquired through the project. Every subject of our course of study had some place in the project, and many things of educational value not mentioned in the course of study had a place, too.

A section of the exhibition.

The geography of Europe signified more to the children when they were preparing a doll for some little girl over there and when they were writing her a letter that they hoped would bring them an answer. Throughout the work there were many chances to bring those other children before them as their world neighbors and to show them something of the cost of war.

Patterns, dress materials, and suitable clothing were subjects of interest and meaning when they were connected with a real need for considering them.

The sewing of the upper grades improved remark-

The boy doll and his wardrobe.

ably. The sewing of the lower grades surprised the teachers and gave them a better understanding of the value of purpose.

The drawing periods were too short when the topics for consideration were the designs for the headboards of real beds, the painting of those beds, the colors on which to exhibit finished outfits to the best advantage, and the printing of the dolls' name cards.

In language periods, every child had something to talk about and something to gain from others. After a little while each class knew the doll of each of the other classes by name. One first grade asked to have its doll's name added to the roll call, and each morning some one answered " Present " for the doll.

Their letters were far better than any other letters that had been written during the year because they were real letters to real children and contained messages that their writers wished to send. The children decided that the best penman should write the letter and sign his or her name to it; the penmanship showed a sudden and marked improvement.

Seventeen proper names went into the spelling lessons, and they helped to fix the fact that proper names begin with capitals.

The making of the bedding offered many opportunities for the use of a ruler and tape measure. In arithmetic periods the children measured the beds to get the length and width of the sheets, pillows, pillowcases, mattresses, and spreads, decided how much to add for hems and seams, measured the required amount on the goods, and cut it off. In the manual training shop the boys had applied arithmetic in the making of the bedsteads.

As they worked on the bedding and made up the beds for the exhibition, the teacher used her opportunity to teach them how to make and care for beds.

The dolls and their outfits were such that they would give pleasure to any little girls. Our children knew that they had accomplished their accepted purpose, and that they had done this in a very creditable manner. From this knowledge came a satisfaction and joy that made them feel ready for other enterprises.

They had worked together for a common purpose, and they had kept uppermost the thought that they were to give pleasure to other children.

Many children asked if they could buy one of these wooden dolls from the special class, and we could have sold a hundred dolls to them if we had had them. Some of the children brought to school dolls dressed according to some style seen in the exhibition; others asked us for patterns to take home for their small dolls.

A group of sixth-grade girls came to us to say that they had formed a club for dressing dolls for poor children. They planned to dress dolls first for our local hospital, and they wished to get a doll at once so that they might start during their vacation, which began the next week. The special class made the doll, and a group of very happy little girls carried it home to plan and work together for its wardrobe.

Teachers: All teachers of the school
Time: Six weeks

2. TABLEAUX FOR THE PILGRIM TERCENTENARY

(FIRST GRADE TO SIXTH GRADE)

Situation. We wished to celebrate the three-hundredth anniversary of the Pilgrims, and we talked with the sixth grades about suitable assembly programs for this occasion. The conversation led to plans for an evening entertainment, in which each class of the school should have a part, and to which the parents should be invited.

Purpose. From several suggestions, tableaux that would show the early history of the Pilgrim Fathers were chosen as the principal feature of the program. When the sixth grades had made out a list of tableaux that they thought would show a connected story of

Pilgrim history, the fourth and fifth grades were asked to make additions or suggestions. After the plan had been explained to the other classes, the completed list was sent from room to room for each class to choose the tableau that it would like to give.

Planning, executing, and judging. For two weeks the Pilgrims had been having a prominent place in the history and language lessons of the school. The need to know more about the details of the tableaux increased the interest in the customs and work of the Pilgrims, and from several rooms requests came for books that would give information on certain points. When the fifth and sixth grades searched the school library for data to answer their own questions, we suggested that they set aside all books containing good Pilgrim material. These books were placed on a table in the hall for the use of all the classes. The public library furnished several excellent books for this reading table, and children brought some from home to lend to the collection. For two weeks this table was the busiest spot in the school.

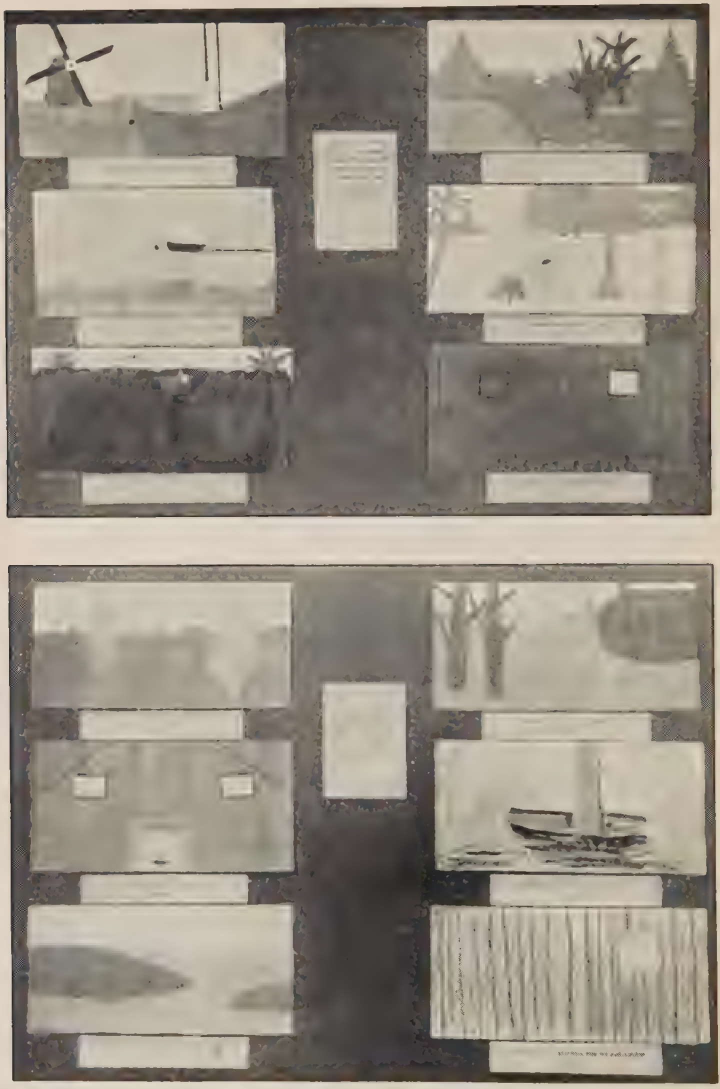
Newspapers and magazines printed many pictures and articles that gave the children ideas and information for their tableaux. Each class soon knew the plans of the other classes, and many pictures and articles were brought by one class for another. We filled the large hall bulletin board with pictures brought to the principal's office for the use of any or all of the classes.

Some of the classes decided to copy famous pictures for their tableaux; others chose quite unknown pictures or planned their own tableaux.

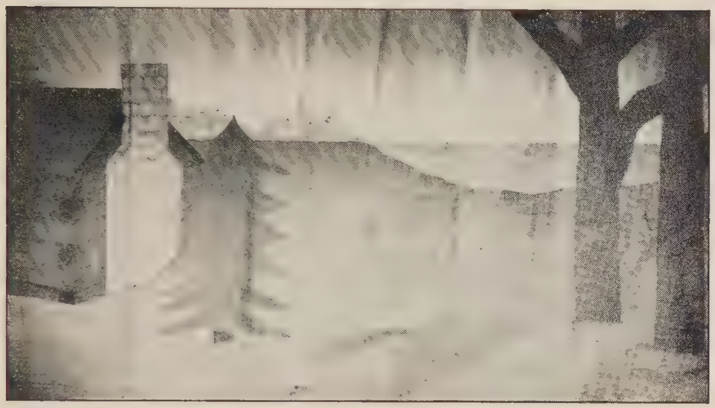
As soon as the work of planning positions in the tableaux began, one class asked for a frame for the pictures, as they called them, and another wanted a background. We asked these classes to go to the assembly hall to show us just what they had in mind and to take measurements. They posed for their tableaux and decided that the frame and the support for the background must be fourteen feet long and seven feet high. When we sent for the janitor and asked him to listen to the plans to see if he could build such a frame and a background support, he said that he could do it and would be glad to have a part in the celebration.

The plan for a background was explained to the other children, and every class wished to have one. All went to work in drawing periods with crayola, paint, or cut paper to make a fourteen-by-seven-inch model of the background that would fit their tableaux.

When the large backgrounds were first planned, the children thought that they could paste together sheets of manila paper, which we had for covering books, and paint them. The first one that was tried proved that this plan would not work. One class decided to show the walls of a Pilgrim kitchen as a background for Priscilla at her spinning wheel. They desired to have a gray wall containing a small window, a stone fireplace, and a shelf with its hourglass and candle. They got some samples of gray cheesecloth and cambric, reckoned the amount needed, and figured the cost of the material. They proved that backgrounds of cloth would be too expensive. Another class wished to represent the walls of a log-cabin meetinghouse, and



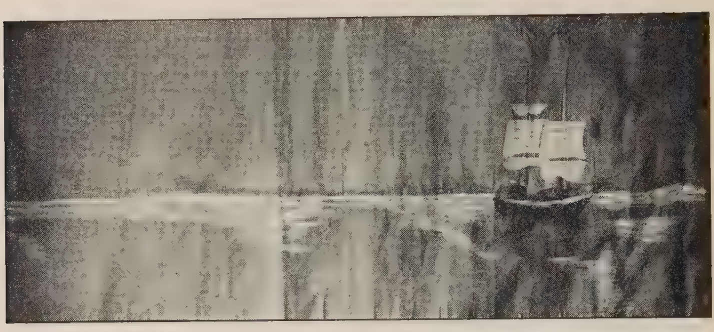
Some of the seven-inch models.



The background for the first Thanksgiving.

a girl whose living room at home was being papered with brown oatmeal paper announced that she thought such paper was the right color and looked like logs because it was rough. Other children made two or three suggestions in regard to ways for representing the cracks between the logs; and when one of the parents gave the class some brown oatmeal paper, they showed the other classes how a background could be made.

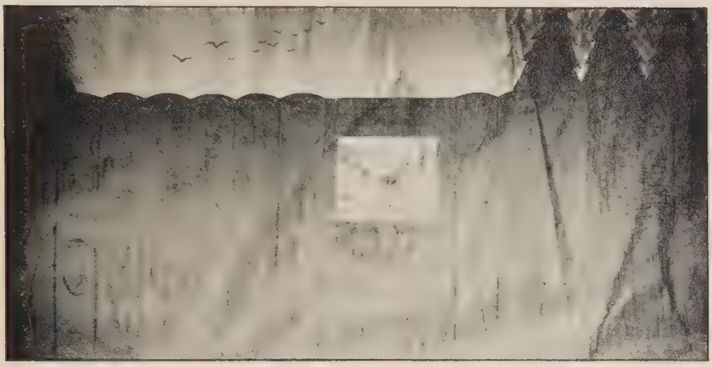
When a general class discussion had decided what work would have to be done, groups were chosen by the class to do it. Strips of manila paper were pasted together to get a piece fourteen feet by seven feet. The assembly hall platform was used for this work, and the strips of wall paper were pasted on the manila paper. One group of children measured, cut, and pasted the wall paper; a third group made two windows and drew the cracks.



The background for the selection of Plymouth for settlement.

When the background was done, ways for hanging it on the support were considered. Nailing, thumbtacking, and holding were discussed but discarded for some reason. Some one said, " Button it on," and when asked to explain, said, " Drive a nail into each end of the support, cut a buttonhole in each end of the top of the background, and button it on the nails." It proved necessary to have more than two nails and two buttonholes, and to paste a narrow strip of cloth across the top of the background for strength; but buttoning-on was a very satisfactory arrangement, because all backgrounds could be hung at once and removed as soon as they were used, and the children could do this.

When the first background was finished and hung, the other classes were invited to see it. They were delighted with it, and asked if one could get wall paper that would look like sky and water. Among the samples secured they found excellent tints for sky, water, sand, and grass. The class that tried gray cambric found just what it desired in a soft gray oat-



The background for the Peace Treaty: Brewster's unfinished cabin.

meal paper. Using the finished background as a model, the other classes went to work in a similar way and made backgrounds that represented the shore, the ocean, Brewster's unfinished cabin, and the deck of the *Mayflower.* One class wished to copy Broughton's picture, "The Pilgrims Going to Church," and they suggested using sheets to take the place of wall paper, as they wished to represent snow. Another class used dark red portières to suggest the curtains of the *Mayflower* cabin. The upper grades helped the lower grades in this work, but even the first grades did some of the work on their backgrounds.

When the question of costumes came up, the girls were delighted to show us paragraphs that they had found in the library books to prove that the dresses did not have to be gray. Each girl of the fifth-grade class, which was to represent the Puritans at church, took great pleasure in making her brown cap with its white band. The sixth grades made a large part of eight dresses and caps for one of the first grades, which was to represent the Pilgrims at play. The special class made all the capes needed. A first grade made enough silver paper buckles for all.

Some of the tableaux required chairs, tables, candles, kettle, a lantern, a spinning wheel, a pen, and other things about which our pictures and books did not give us satisfactory information. Groups of the older children were taken to the museum of the Historical Society in the public library to settle disputed questions about things that did or did not belong to this period. The Historical Society loaned us several articles, and all the children had a chance to see them and talk about them.

A Puritan costume made by the sixth grade.

Through the children's conversation at home, parents became much interested in the work and they asked if they could do anything to help. Some mothers made costumes for other children as well as for their own. One mother loaned us a complete Dutch costume for a woman in the tableau, "The Departure from Holland." Other mothers loaned us foot stoves, kettles, chairs, and an old Dutch Bible. One father sent a rattlesnake skin, another made us some arrows, and another wired our frame and fireplace for electric lighting. Three or four fathers hunted up some ancient guns for our use.

Several suggestions were made in regard to the way in which the tableaux should be introduced or explained to the audience. The class that was reading *The Courtship of Miles Standish*, and had chosen the picture of Priscilla found in that book as the one they wished to use in their tableau, asked to have these lines of the poem recited as the tableau was shown:

Priscilla and John Alden bid farewell to the *Mayflower*.

Seated beside her wheel, and the carded wool like a snow-drift
  Piled at her knee, her white hands feeding the ravenous spindle,
While with her foot on the treadle she guided the wheel in its motion.
  Open wide on her lap lay the well-worn psalm-book of Ainsworth,
Printed in Amsterdam, the words and the music together,
  Rough-hewn angular notes, like stones in the wall of a churchyard,
Darkened and overhung by the running vine of the verses.
  Such was the book from whose pages she sang the old Puritan anthem,
She, the Puritan girl, in the solitude of the forest,
  Making the humble house and the modest apparel of homespun
Beautiful with her beauty, and rich with the wealth of her being!

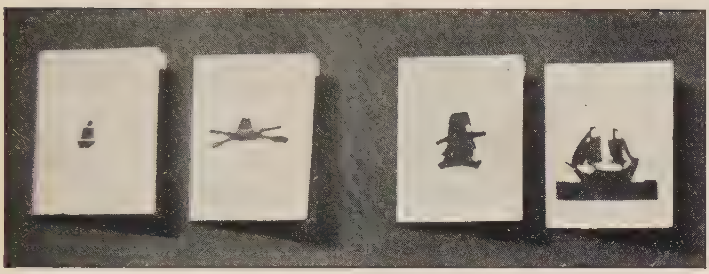
This idea received the hearty approval of the class, and some one suggested that other lines in that poem would be good for the third-grade tableau, "The

Messenger from the Narragansetts." When some of the other classes were asked if they could find poetry to describe their tableaux, several children spoke of a book which they had seen on the reading table and explained that it had "a lot of Pilgrim poetry" in it. This was Stevenson's *Poems of American History*, and it provided poems to explain many of the tableaux. All the children of a class learned the poem for its tableau and chose one from the class to recite the poem as the tableau was shown.

By the time things were ready for a rehearsal of the tableaux with their backgrounds and explanatory verses, the children had decided that it would be necessary to have three groups of stage managers, one for curtains, one for backgrounds, and one for stage properties. These groups were chosen from the fifth and sixth grades. Each group chose a leader, made notes on the printed program to show just what that group should do and just when it should do it, and tacked these directions in a convenient spot for reference. One tall teacher helped with the backgrounds, but the children did the rest of the stage work.

The classes waited in their rooms for their turns on the program, and a fifth-grade girl had the entire responsibility for calling each class so that it would be ready to step upon the stage at the proper moment. This girl did her work in a way that would have been a credit to an adult, for she kept her head and, without asking a teacher a single question, called each class at the right moment.

Knowledge, power, attitude, or skill acquired through the project. All the children had learned



The programs as decorated by the children.

many facts of history, and they had learned them well because of the connection with things of great interest to them. They had gained some knowledge of the hardships and the perseverance of the Pilgrims, and they felt a greater appreciation of the example these forefathers had set. Their manner of reciting the poetry explaining their tableaux made us hope that they had gained some inspiration.

Many of the children had done considerable reading for a definite purpose, and so had gained something of good reading habits. Their desire to find certain facts had led to a better knowledge of books, a better understanding of tables of contents and indexes, and a little better ability to judge the worth of books.

They learned to recognize some famous pictures and to value them more because of their intelligent observation.

They were much interested during the drawing lessons in which they worked on the models for the background. With their tableaux in mind, they criticized the results and chose the best one. One sixth grade drew all of its large background to scale from the little model. All of the classes gained a better knowledge of proportions from this work.

The making of the background furnished many opportunities for the use of a ruler and a yardstick, and made it necessary for the children to add, subtract, multiply, and divide in order to get dimensions right. They used whole numbers, mixed numbers, and fractions intelligently, for they saw them as values.

Those who went to the museum of the Historical Society learned much about the early life of the Pilgrims, but they learned many other things, the most valuable being the museum itself. Those who did not go learned much from those who did and from the things that were loaned us by the Society.

All the work helped to give a new meaning to the songs, " The Landing of the Pilgrims" and "A Mighty Fortress is Our God," which the children sang as part of the program.

All the classes recognized the fifth-grade girl's right to leadership, and they followed it gladly. They saw the value of good leaders in several other parts of the work, and for the good of the cause chose some from their numbers to be these leaders.

Their desire to have perfect backgrounds caused them to set and keep high standards. They used the greatest care in measuring, cutting, and pasting. They found that they could keep the work clean and exact, and they valued its cleanliness and its accuracy. They carried to successful completion a difficult undertaking and felt the satisfaction that comes with hard work well done.

PART THREE

HINTS AND HELPS FOR PROJECT TEACHERS

CHAPTER TWENTY-ONE

The Teaching of Geography

THE SCOPE AND PURPOSE

" School geography primarily is concerned with the needs and wants of man — what they are, why they are in demand, and how they are met." — Branom: *The Project Method in Education* (Richard G. Badger).

" Studies in geography should help to give us a clear understanding of the interdependence of people living in regions differing much in resources and conditions, and should satisfy an intellectual interest in earth phenomena." — Bonser: *The Elementary School Curriculum* (The Macmillan Company).

" The main part of geographical teaching consists in building up a steadily increasing, but gradually formed idea about the world's workers and the kind, the amount, and the quality of work they do. The type of presentation followed should assist pupils to acquire an outlook in due perspective upon the whole world as the home of man, where some places are of more importance than others because the work that is being done in those places and the results which are being accomplished are more valuable to mankind." — Smith: *Teaching Geography by Problems* (Doubleday, Page & Co.).

" By a study of national histories, by reading for enjoyment the literature and folklore of the people studied, by listening to their music, by learning their customs, laws, religion, and scientific achievements, and their contributions to art — by thus reliving the life of any people and appreciating their problems and their accomplishments, the children will come to have an intelligent regard for that people. They will see the ideals and characteristics of one nation, not as better or worse than ours, but as different — the outcome of a specific set of conditions. They should gain an idea of the value of these characteristics not as forces to separate people, but to unite them, giving a variety to social life that would otherwise be lacking." — HARTMAN: *The Child and His School* (E. P. Dutton & Co.).

ILLUSTRATIONS OF THE TYPES OF PROJECTS IN GEOGRAPHY

All of the projects listed have been successfully carried out in elementary school classrooms. The Roman numeral indicates the grade where the work was done.

A. The problem type

1. What has helped the United States to become "a young industrial giant"?[1] VI.
2. How were plants made into coal?[1] IV.
3. Why has our trade with South America grown so slowly? V.
4. What does England do with her coal? VI.
5. How has Asia's progress been checked? V.
6. How many people help to get your milk ready for you? I.

B. The construction type

1. Filing pictures that show the industries of nations. V.
2. Making an index of articles in *Current Events* for future reference. VI.

---

[1] Sheppard's *Geography for Beginners* was used in answering the second question. It took two days to pick out the facts to answer the question. Many books were used for the first problem. The class worked on it for ten weeks.

3. Dressing dolls to show costumes of other countries. III.
4. Dramatizing scenes in the life of Kit and Kat. II.
5. Constructing a model of the Panama Canal. VI.
6. Making composite pictures: Japanese Children Playing with Kites; A Scene in Holland; The Feast of the Lanterns. III.
7. Building an Eskimo igloo. I.

C. The appreciation type

1. Interpreting the record, "The Nut Cracker Suite." III.
2. Considering the art, literature, and inventions given to the world by other countries. I–VI.
3. Examining pictures of our resources. V.
4. Reading and discussing current events. V, VI.

D. The drill type

1. Studying a map to learn how to locate states and cities on an outline map. V.
2. Fixing in mind the location of equator, meridians, and zones. IV.
3. Using for increase in skill atlas, gazetteer, index, and pronouncing vocabulary. VI.

BIBLIOGRAPHY

Content and procedure

BOBBITT. *The Curriculum.*
Reading for appreciation of life in other lands.
BONSER. *The Elementary School Curriculum.*
Principles for selection of subject matter.
BRANOM. *The Teaching of Geography.*
The problem method.
HARTMAN. *The Child and His School.*
Bibliography of sources for subject matter.
MCMURRY and PARKINS. Elementary Geography, Advanced Geography.
Problems for independent study by Miss Hennes.
SMITH. *Teaching Geography by Projects.*
Illustrative problems, suggestions for solutions, bibliography of reference materials.
STARK. *Every Teacher's Problems.*
Purposes of geography.

Described projects

Angelo. "A Japanese Project." III. *Primary Education,* June, 1921.

Briggs. "The Excursion as a Means of Education." VII. *Teachers College Record,* June, 1921.

Cadwallader. "A Market Project." I. *Journal of Educational Method,* April, 1922.

Carter. "Socializing the Study of South America." V. *Teachers College Record,* February, 1921.

Fox. "Main Streets of the Nation." V. U. S. Bureau of Education Bulletin, Washington, D. C.

Johnson. "Teaching Australia by Problems." VI. *Popular Educator,* March, 1922.

Keelor. "Broadening the Horizon for the Child of Seven." II. *Journal of Educational Method,* September, 1922.

Krackowizer. "Montana: A Pageant." I–VI. *Journal of Educational Method,* November, 1922.

Neal. "Becoming Acquainted with France and the French." High School. *Journal of Educational Method,* May, 1922.

Warren. "A Project for the Entire Term." IV. *Journal of Educational Method,* September, 1921.

Washington. "America the Beautiful." *Journal of Geography,* January, 1924.

CHAPTER TWENTY-TWO

The Teaching of History

THE SCOPE AND PURPOSE

"A study of how man has come to be as he is and believe as he does." — Robinson: *The Mind in the Making* (Harper & Brothers).

"The approach to studies in history should be through problems in present-day life which can be understood or interpreted only by finding out how the present has resulted from the past, and through problems of conduct which may be solved from the guidance which may be derived from the past." — Bonser: *The Elementary School Curriculum.*

"Ideas of present conditions should be strengthened by constant excursions into the past for explanations. A study of the people of various nations and their origin and development alone leads to comprehension of their various characteristics. Gradually out of such historical study there should develop a realization of the great events that have worked together for the civilization of the world, and of the particular contributions of the great nations of the past." — Hartman: *The Child and His School.*

"Since the historical account is to be used primarily as a means of reconstructing the group experience, the reading must not be simply an abstract sociological and political analysis of conditions, of causes and effects, etc.; and dull chronological record of happenings. The purpose should be living, and learning through living." — Bobbitt: *The Curriculum* (The Macmillan Company).

ILLUSTRATIONS OF THE TYPES OF PROJECTS IN HISTORY[1]

A. The problem type

1. Columbus tried and tried again. What must have made it hard for him to do so? IV.
2. How did Samuel Adams earn the title, "Father of the Revolution"? V.
3. Prove that "Seward's Folly" should have been called "Seward's Foresight." VI.
4. Explain: The Crusades caused a great loss in wealth and a great gain in wealth. VI.
5. What made Pennsylvania grow more rapidly than the other colonies did? V.

B. The construction type

1. Building a plasticine and cardboard model of the Parthenon. IV.
2. Representing the Roman Forum with blocks and paper figures. VI.
3. Making properties for a Pilgrim schoolroom. III.
4. Writing talks for the younger children on the subject, "Washington in New Jersey." An assembly program for February 22. VI.
5. Making a puppet theater and planning scenes to show the explorers of the New World. IV.
6. Arranging tableaux to show the greatest work of some of the American leaders and heroes. V.
7. Telling the life of the cave men in pictures. II.
8. Dramatizing the work of father, mother, and children in an Indian home. I.
9. Writing messages in Indian sign language. II.

---

[1] The Roman numerals refer to the grade in which the project has been carried out.

C. The appreciation type

1. Examining the steps in the history of weaving at the Eastern States Exposition. III, IV.
2. Reading stories about leaders and heroes. III–VI.
3. Studying the lives of men who have made great contributions to the world. V, VI.
4. Reading and discussing current events. V, VI.
5. Considering growth in science and art. VI.

D. The drill type

1. Fixing in mind a few dates and names. V, VI.
2. Using encyclopedia, source books, and card catalogues for greater skill in finding desired materials. VI.

BIBLIOGRAPHY

Content and procedure

Bobbitt. *The Curriculum.* Chapter 18.
Reading for historical background.
Bonser. *Elementary School Curriculum,* Chapter 12.
Suggestions for projects, and principles for selection and organization.
Hartman. *The Child and His School.*
Bibliography of subject matter.
Johnson. *Teaching of History.*
Stark. *Every Teacher's Problems.*
Purposes of history.

Sources for aims and subject matter

Branom. *The Project Method in Education,* Chapter 13.
Suggestions for problems.
Hatch. "Dangers and Difficulties of the Project Method." *Teachers College Record,* September, 1921.
Student reaction to the Project Method.
Kilpatrick. "What Shall We Seek from a History Project?" *Journal of Educational Method,* December, 1923.
Suggestions for measuring the success of a history project.
Snedden. "History Studies in School — For What Purpose?" *Teachers College Record,* January, 1924.

Described projects

Branom. "The Problem-Project Method in History." *Historical Outlook,* November, 1920.

Fox. "Main Streets of the Nation." V. U. S. Bureau of Education Bulletin.

Granger. "A Coöperative Story." II. *Primary Education*, November, 1923.

Hatch. "Teaching History by the Project Method." *Teachers College Record*, November, 1920.

McCord. "The Writing and Producing of a Marionette Play." VI. *Journal of Educational Method*, October, 1923.

McGuire. "A Fifth Grade History Project." V. *Journal of Educational Method*, December, 1923.

Richardson, Pratt: "The Use of Dramatics in Seventh Grade History." VII. *Journal of Educational Method*, October, 1922.

CHAPTER TWENTY-THREE

THE TOOL SUBJECTS: ARITHMETIC, SPELLING, WRITING, READING (MECHANICS OF)

DRILL FOR INTELLIGENT USE OF TOOL SUBJECTS

There will be no arithmetic nor spelling projects, no writing nor reading projects, unless these subjects are made ends, not means. These are tool subjects.

Projects of all types present many needs for skill in reading, writing, spelling, and number work. These subjects show the children a real reason for the intelligent use of the tools and provide an incentive for the drill necessary to acquire skill in using them. When they purpose to get skill, they undertake drill projects.

An opportunity to make individual progress on a definite amount of drill work will furnish a purpose for a child's best effort. Interest will be added if each child is shown how to keep his own record of progress.

THE SCOPE AND PURPOSE

Arithmetic

Arithmetic should give the children power to make intelligent and accurate use of numbers in their everyday life.

Spelling

" The study of spelling has value for the child just to the extent that the words learned are the words that the child uses or that he will use in the near future in doing the writing involved in carrying on the everyday affairs of life." — TIDYMAN: *The Teaching of Spelling* (World Book Company).

Writing

" Penmanship should be taught in relationship to needs which will make legibility the most essential factor." — BONSER: *The Elementary School Curriculum.*

Reading

" Progressive teachers now think of reading primarily as a means of extending experience and of stimulating the thinking power of boys and girls." GRAY: "The Importance of Intelligent Silent Reading," *The Elementary School Journal,* January, 1924.

REAL REASONS FOR THE USE OF ARITHMETIC

A record kept during one term by the teachers of an elementary school:

A. Counting

1. To find out things needed for row, group, or class.
2. To repeat units of design.
3. To find pages.
4. For sand-table constructions.
5. For games and scores.

B. Measuring

1. To make fireplace, seats, and costumes for a Pilgrim play.
2. To mark goals for relay race.
3. To space letters on book covers.
4. To find out the amount of cloth needed for costumes.
5. To plan and build counters and shelves for a play store.
6. To make graphs of progress.
7. To find weight of soils for a science experiment.
8. To construct a large milk bottle for a dramatization.

9. To cut cloth for the cushions of doll furniture made in handwork periods.
10. To cut dresses for a Dutch doll.
11. To find the middle of a bulletin board.
12. To test estimates made in practice for a school contest in ability to estimate distances, weights, and liquid contents.
13. To learn growth in plants.
14. To sell articles in a play store.
15. To find suitable boxes in which to send gifts made for a school in the Kentucky mountains.
16. To test these boxes for parcel post regulations.
17. To weigh the boxes to find out cost of sending.
18. To find one's own gain in weight.
19. To learn contents and weights used in a play store.
20. To find the area of school grounds to settle a dispute about it.
21. To find how much fencing is needed for the school garden.
22. To find the weight of old rubber and paper brought for the school funds.

C. United States money; adding, multiplying, and making change

1. To buy milk.
2. To buy thrift stamp.
3. To buy seeds.
4. To buy tickets for a lecture.
5. To pay class dues.
6. To find the amount due for seed orders.
7. To find the amount due for sewing and manual training supplies.
8. To find the amount to be paid for cloth for costumes.
9. To pay for sending parcel post package to Kentucky.

D. Percentage

1. To mark one's own paper.
2. To average one's marks for a month.
3. To find the discount allowed schools.
4. To read graphs.
5. To make graphs.

E. Business forms and records

1. Inventories of books charged to pupils.
2. Inventory of books discharged from the building.
3. Bills for class dues.
4. Receipts for class dues.

ARTICLES PURCHASED BY FOURTH-GRADE CHILDREN DURING ONE MONTH

The figures after the articles tell the number of times those articles were purchased during the month. Articles purchased but once have no figures after them. This is an accurate record kept by a fourth grade of Rockville, Connecticut.

1. Apples (2)
2. Almond flavoring
3. Bread (70)
4. Butter (30)
5. Broom
6. Bologna (8)
7. Beans (6)
8. Bananas (4)
9. Baking powder (2)
10. Book
11. Ball of string
12. Bacon
13. Blouse
14. Crackers (11)
15. Clams (2)
16. Chimney
17. Cheese (2)
18. Cookies (8)
19. Cans of corn (3)
20. Cake (17)
21. Crullers (3)
22. Cream puffs (4)
23. Cocoa
24. Cinnamon
25. Corn
26. Chicory
27. Coffee (6)
28. Cornstarch (6)
29. Cream of wheat
30. Chalk
31. Cranberries
32. Codfish
33. Catchup
34. Coat
35. Collar
36. Cleanser, Dutch, Octagon
37. Carrots (2)
38. Candy (50)
39. Doughnuts (27)
40. Dates
41. Doll
42. Eggs (15)
43. Eraser (2)
44. Flour (7)
45. Frankfurts (7)
46. Gum
47. Grapes
48. Gloves
49. Ham, pressed (5)
50. Ham, boiled (2)
51. Liver (2)
52. Headache tablets
53. Ice cream
54. Karo
55. Kale
56. Lard (13)
57. Lamb
58. Lemons (4)
59. Handkerchiefs (3)
60. Milk in bottles (12)

61. Milk, condensed (2)
62. Molasses (4)
63. Matches (7)
64. Mincemeat (3)
65. Mustard
66. Meat to stew (4)
67. Mutton
68. Needles
69. Nabiscoes
70. Nuts (3)
71. Notebook
72. Necktie (2)
73. Oil (29)
74. Onions (3)
75. Oysters
76. Oranges (6)
77. Oatmeal
78. Potatoes (11)
79. Pins
80. Pickles (4)
81. Peas
82. Pork (3)
83. Pie (6)
84. Pictures (2)
85. Peaches (2)
86. Peanuts (2)
87. Pepper
88. Powder, naphtha
89. Powder, Japo
90. Powder, tooth
91. Parcel post (3)
92. Pop corn (3)
93. Pattern
94. Newspaper (15)
95. Prunes
96. Pan
97. Peanut butter (2)
98. Pencil
99. Raisins (2)
100. Rice (4)
101. Rubbers (2)
102. Ribbon (3)
103. Rolls
104. Rexal tickle stopper
105. Sugar (28)
106. Soup meat (12)
107. Steak, Hamburg (8)
108. Steak, short
109. Steak, round (3)
110. Soap (12)
111. Soup in cans (3)
112. Snow buoy
113. Shoes, mending (3)
114. Shoe lacing
115. Shoes (2)
116. Shoe blacking
117. Salt
118. Stove blacking
119. Soda, bottles
120. Soda
121. Stamps (5)
122. Sirup
123. Salt pork (3)
124. Sausage
125. Screws
126. Uneeda biscuits (2)
127. Veal loaf
128. Vinegar
129. Tobacco (3)
130. Turpentine
131. Tablet (9)
132. Towels
133. Tea
134. Thread
135. Walnuts (2)
136. Yeast (24)

REAL REASONS FOR THE USE OF WRITING AND SPELLING

A record kept during one month by a third-grade teacher:

A. Letters

1. To parents to tell them about Fathers' Night.
2. To Kentucky children to answer questions in their letter of thanks for a Christmas box.
3. To a sick classmate.
4. To thank a boy for an alligator loaned for observation.

B. A booklet, "Safety First in Rhymes."
C. A play, "Be Clean, Be Careful."
D. Programs of the play for the visiting children.
E. A list of materials desired for the construction of a play store.

BIBLIOGRAPHY

Psychology of the tool subjects

HUEY. *The Psychology and Pedagogy of Reading.*
SHOUSE. "Obstacles to Good Handwriting." *The Elementary School Journal,* December, 1923.
THORNDIKE. *The Psychology of Arithmetic.*
TIDYMAN. *The Teaching of Spelling.*

Content and procedure

Arithmetic

DEWEY AND MCLELLAN. *The Psychology of Number.*
THORNDIKE. *The New Methods in Arithmetic.*
The Psychology of Arithmetic.
WILSON. *A Survey of the Social and Business Usages of Arithmetic.*

Spelling

AYRES. *A Measuring Scale for Ability in Spelling.*
SUZZALLO. *Teaching of Spelling.*
THORNDIKE. *The Thorndike Word List.*
TIDYMAN. *The Teaching of Spelling.*

Writing

FREEMAN. "Present Day Issues in the Teaching of Handwriting." *The Elementary School Journal,* September, 1923.
FREEMAN. *The Teaching of Handwriting.*
SHOUSE. "Obstacles to Good Handwriting." *The Elementary School Journal,* December, 1923.

Reading

Bolenius. *Teachers' Manual of Silent and Oral Reading.*
Chubb. *The Teaching of English.*
Thorndike. "Reading as Reasoning." *Journal of Educational Psychology*, June, 1917.
Huey. *The Psychology and Pedagogy of Reading.*
Stone. *Silent and Oral Reading.*

CHAPTER TWENTY-FOUR

The Teaching of Composition

THE SCOPE AND PURPOSE

"The chief function of language is communication. Hence, the activities of the English classroom must provide for actual communication." — Hosic: U. S. Bureau of Education *Bulletin*, 1917, No. 2.

"One common fault in our present practice is due to the failure to see that thought and language are twin products, and that we must deal with both in order to deal effectively with either." — Chubb: *The Teaching of English* (The Macmillan Company).

"A child's absorption in accounts of others' experiences can be skillfully molded into truly coöperative work among the children of the group with vigorous but good-spirited criticism of one another's results." — Leonard: *English Composition as a Social Problem* (Houghton Mifflin Company).

"The first step in teaching composition is to create or seize upon situations in which expression in speech or in writing is urgent and gratifying. They are numerous and near at hand. Everybody likes to tell about himself and his own experiences; everybody likes to give welcome information; everybody likes to entertain, to merit approval, to carry his point, to play a part; to add to his possessions, to reciprocate a favor. If only the class period is conceived as a meeting of friends, not primarily as a formal recitation or testing place, real situations for composition will present themselves." — Hosic, *in* Rapeer: *Teaching the Elementary School Subjects* (Charles Scribner's Sons).

ILLUSTRATIONS OF PROJECTS IN COMPOSITION[1]

1. Writing letters to give or get information, to ask favors or to thank other people for them. II–VI.
2. Writing notices to give or get information. III–VI.
3. Telling stories or incidents to other members of the group. I–VI.
4. Giving information or directions. III–VI.
5. Talking to give or get one's viewpoint. I–VI.
6. Writing stories or reports for a class paper. III–VI.
7. Practicing mechanics for skill in speaking or writing in the most effective way. II–VI.
8. Studying plays to learn how to arrange and punctuate the speeches in a play of their own. IV–VI.
9. Studying and writing programs for assembly periods. III–VI.
10. Listing materials desired for some class project. III–VI.

BIBLIOGRAPHY

Content and procedure

Bolenius. *The Teaching of Oral English.*
Subject matter and method.
Chubb. *The Teaching of English.*
Content and procedure.
Hosic, *in* Rapeer. *Teaching the Elementary School Subjects.*
Principles, suggestions for subject matter and method, and bibliography.
U. S. Bureau of Education *Bulletin*, 1917, No. 2. Outline of essentials.
Leonard. *English Composition as a Social Problem.*
Discussion of social aims and procedure.
Sheridan. *Speaking and Writing English.*
Aims and a course of study.
Mahoney. *Standards in English.*
Hatfield. "Project Method in Composition." *English Journal*, December, 1922–March, 1923.

---

[1] The Roman numerals refer to the grade in which the project has been carried out.

Described projects

BRATTON. "The Ethical Culture School Year Book." I — High. *The Elementary School Journal,* December, 1922.

CLARKE. "A Project in Oral and Written Expression." III. *Journal of Educational Method,* January, 1923.

HOSIC. "Classroom Technique in Composition." II–V. *Journal of Educational Method,* January, 1922.

JAMES. "A Christmas Project." III. *Journal of Educational Method,* December, 1922.

LEONARD. "A Setting for the Gettysburg Address." VII. *Essential Principles of Teaching Reading and Literature.*

"Carl and His Friends." III. *Essential Principles of Teaching Reading and Literature.*

MEARNS. "English as an Expression of the Activities of Everyday Life." I–VI. *Journal of Educational Method,* March, 1923.

PEOPLES. "Studies in Advertising." VI. *Journal of Educational Method,* June, 1923.

SABEL. "Story Telling." High School. *English Journal,* February, 1924.

SPENCER. "Making a Class Paper." VII. *Journal of Educational Method,* November, 1922.

CHAPTER TWENTY-FIVE

The Teaching of Literature

THE SCOPE AND PURPOSE

"Literature is the expression of feelings and beliefs which constitute the great difference among peoples the world over and which likewise constitute unity of feeling about fundamental matters and a common understanding of them. If we are to understand great ideas, we must become acquainted with those fundamental matters in feeling and character in which we are all alike. Literature provides this material, and the literary expressions of such universal agreement in thought and feeling serve to form ideals, to make people conscious of what they really believe in, and to help them to realize these ideals." — Smith: *The Heart of the Curriculum* (Doubleday, Page & Co.).

"Literature is not only a more comprehensive revelation of human experience than man has made in any other one form — it is further a revelation and embodiment of life at once concrete and artistic."

"When we return from this wide wandering [in literature], we come with freightage of memory and desire. We look upon familiar scenes with eyes made intelligent by travel. We challenge familiar objects and experiences with a curiosity that has grown more keen and sympathetic under the stimulus of that foreign adventure. We are better neighbors and townsmen for having become in a sense citizens of the world. We understand our own hearts the better for that friendly, intimate sojourn in the hearts of others." — COLBY: *Literature and Life in School* (Houghton Mifflin Company).

" What the class, that composite child, needs are such things as display the broader, simpler aspects of life and art, such as call out in them the simpler and more direct responses." — MACCLINTOCK: *Literature in the Elementary School* (University of Chicago Press).

" Men need to use literature of different types and structures, but this does not require understanding of the technique of literary types and structures. A man can use a watch for the human purpose of telling time without knowing the technique of the mechanism. In the same way, he can use literature for securing the revelations to which we have referred without knowing how it is made." — BOBBITT: *The Curriculum.*

ILLUSTRATIONS OF PROJECTS IN LITERATURE[1]

1. Reading Andersen's "The Steadfast Tin Soldier" to understand the song, "The Little Tin Soldier." IV–VI.
2. Drawing a series of blackboard pictures to reproduce "The Turkey's Nest." I.
3. Dramatizing "Betty's Guest." III.
4. Rereading *Alice in Wonderland* for a better understanding of a moving picture production and a reënjoyment of the story. IV, V.
5. Memorizing some of Eugene Field's poems to recite for mother's pleasure. I.
6. Listening to "King Robert of Sicily." VI.
7. Reading "Epaminondas" to learn why the teacher asked Alex if he knew any one of that name. V.

---

[1] The Roman numerals refer to the grade in which the project has been carried out.

8. Considering some of Stevenson's poems to find the one that best pictures a very lonesome little boy. IV.
9. Constructing a sand table to represent Robinson Crusoe's island and hut. IV.
10. Reading "Why the Sea is Salt" to satisfy a curiosity aroused by the title. III.

BIBLIOGRAPHY

Content and procedure

Bobbitt. *The Curriculum.*
Reading for leisure time.
Bonser. *The Elementary School Curriculum.*
Principles and suggested subject matter.
Bryant. *How to Tell Stories to Children.*
Story-telling and stories for telling.
Colby. *Literature and Life in School.*
Influence on behavior.
Fay-Eaton. *The Use of Books and Libraries.*
History of children's books, literature for children, and school libraries.
Hosic. *Empirical Studies in School Reading.*
Positive and negative methods of teaching.
Leonard. *The Essential Principles of Teaching Reading and Literature.*
Suggestions for procedure.
MacClintock. *Literature in the Elementary School.*
Purposes and methods.
Smith. *The Heart of the Curriculum.*
Suggestions for organizing and using reading material.

Described projects

Chubb. *Festivals and Plays.* K-High.
Clay. "The Hat Box in Literature." High. *English Journal,* Dec., 1916.
Green. "Hiawatha's Wedding Feast." II. *Journal of Educational Method,* March, 1922.
Leonard. "The Lighting and Extinction of Feathertop." High. *Essential Principles of Teaching Reading and Literature.*
Potter. "The Tale of the Magic Vine." III. *The School Arts Magazine,* September, 1923.
Scranton. "An Exceptional Group in Reading." IV. *Journal of Educational Method,* October, 1922.
Stone. "Some Illustrative Silent-Reading Lessons." IV–VI. *Teachers College Record,* September, 1920.
Thompson. "A Project in Modern Poetry." VII. *Journal of Educational Method,* September, 1923.
"The Use of Pantomime." I–IV. *Primary Education,* May, 1921.
Wing. "King Robert of Sicily." VI. *The School Arts Magazine,* Feb., 1923.

INDEX

Arithmetic:
  articles purchased by fourth-grade children, 230
  bibliography of content and procedure, 232
  drill for intelligent use of, 227
  projects described:
    a fruit store, 122
    individual progress in arithmetic, 167
  real reasons for the use of, 228
  scope and purpose of teaching, 227

Composition:
  bibliography of content and procedure, 235
  bibliography of described projects, 236
  illustrations of projects, 235
  projects described:
    a birthday party, 127
    a post office, 146
    post cards and letters, 131
  scope and purpose of teaching, 234
Course of study, 91
Criteria of success in teaching, 62

Danger of *laissez faire*, 86
Direction of study, 76

Extra-curricular activities, 81

Geography:
  bibliography of content and procedure, 221
  bibliography of described projects, 222
  illustrations of projects, 220
  projects described:
    a trip to South America, 163
    big questions in geography, 169
    geography through current events, 177
  scope and purpose of teaching, 219

History:
  bibliography of content and procedure, 225
  bibliography of described projects. 225
  illustrations of projects, 224
  projects described:
    a play to show important events, 181
    big questions in history, 169
    tableaux for Pilgrim tercentenary, 205
  scope and purpose, 223

Literature:
  bibliography of content and procedure, 239
  bibliography of described projects, 239
  illustrations of projects, 238
  projects described:
    Eugene Field for appreciation, 104
    Hansel and Gretel, 136
  scope and purpose, 237

Methods of work, 22
Multiple learning, 21

Organization and drill, 89

Philosophy of method, 85
Project method:
  a method of learning, 5, 14, 26, 51
  a method of living, 3, 14
  applications of, 75
  a way of teaching, 5, 27, 58
  comparison with other educational concepts, 18
  contributions to educational ideas, 21
  definition of, 8, 92
  economy of time, 70

Project method — *Continued:*
  illustration of, 3
  opportunities for social experience, 23
  regard for individual differences, 66
  results obtained, 68
  use of books, 103
  value of the concept, 19
  why study, 17
Projects:
  achievement type, 54
  appreciation type, 54
  as democracy, 13
  as experience, 11
  construction type, 52, 102
  measure of quality, 53, 65, 103
  problem type, 56
  selection of, 30, 97
  situations conducive to, 30
  stages of, 29, 98
  teacher's part in each type, 58
  types of, 50

Reading, mechanics of:
  bibliography of content and procedure, 233
  drill for the intelligent use of, 227
  project described:
    Mother Goose's health party, 109
  scope and purpose, 228

Sample projects:
  Grade 1:
    Eugene Field for appreciation, 104
    Mother Goose's health party, 109
    "Safety first" from a sand table, 116
  Grade 2:
    a birthday party, 127
    a fruit store, 122
    post cards and letters, 131
  Grade 3:
    a post office, 146
    Hansel and Gretel, 136
Sample projects — *Continued:*
    individual progress in spelling and arithmetic, 167
  Grade 4:
    a health poster, 151
    a puppet show, 154
    individual progress in spelling and arithmetic, 167
  Grade 5:
    a trip to South America, 163
    individual progress in spelling and arithmetic, 167
    some big questions in geography and history, 169
  Grade 6:
    a play to show important events in history, 181
    geography from current events, 177
    individual progress in spelling and arithmetic, 167
    some big questions in geography and history, 169
  Special classes:
    checkerboards, 185
    the Hackensack Bank, 188
  Kindergarten:
    banks for thrift, 193
  Entire school:
    dolls for children in Europe, 197
    tableaux for Pilgrim tercentenary, 205
"Set" of mind, 22
Social experiences, 23
Socializing the recitation, 88
Spelling:
  bibliography of content and procedure, 232
  drill for the intelligent use of, 227
  project described:
    individual progress in spelling, 167
  real reasons for the use of, 231
  scope and purpose, 227
Subject units, 79

Teacher's rôle:
  carrying forward, 40
  organization and retention, 44
  planning, 37
  preliminary stages, 34
  purposing, 36

Writing:
  bibliography of content and procedure, 232
  drill for the intelligent use of, 229
  real reasons for the use of, 231
  scope and procedure, 228

A curriculum in tune with modern life

CHILD LIFE AND THE CURRICULUM

By Junius L. Meriam

Professor of School Supervision and Superintendent of the University Schools, University of Missouri

The traditional curriculum is tottering and crumbling. The demand is for less formality and more vitality in education. Public schools must give more attention to current problems in home, community, and national life. The subjects taught in the schoolroom must relate more closely to the child's life.

Here is proposed a really modern course of study. The author states his theory in the light of more than a dozen years' practical experience. His work presents a notable amount of modern educational practice that warrants the critical consideration of school officials, school teachers, and school communities.

His book gives a thorough discussion of almost every problem that is likely to arise in the conduct of an elementary school. Ideas of the leaders of educational thought are carefully evaluated, with experience as the touchstone, and the very latest developments in education are ably considered.

Among the many excellent chapters probably the most noteworthy is the one on educational tests and measurements. The author, who keeps his feet on the ground, makes no attempt to offer a panacea for all the ills of elementary education; he does, however, point to relief and a way out of the beaten path.

Other features of this book of special help are the following:

1 Statement outline for each chapter.
2 Lists of supplementary readings and general references at the ends of chapters. These constitute a good bibliography of modern educational literature.
3 Numerous tables of information relating to causes of withdrawals, school subjects and time assignments, distribution of grades, books read in different grades.
4 Outlined curriculum of the University of Missouri Elementary School.

The author not only indicates the possibility of greater service on the part of the school; he points the way from the vantage point of substantial achievement.

Cloth. xii + 538 pages Price $2.68.

WORLD BOOK COMPANY

Yonkers-on-Hudson, New York
2126 Prairie Avenue, Chicago

UNIT STUDIES IN GEOGRAPHY

By Rose B. Clark

Professor of Elementary Education
Nebraska Wesleyan University

IN THIS book the subject matter of geography is divided into a series of workable study units which provide the teacher with a flexible program and abundant helps. The unit studies were selected primarily to suit children's needs and interests. They show how to use the affairs of the child's world to bring out the practical business and social significance of the study of geography.

Each unit is self-contained and deals with a particular geographical principle or feature, or with a country or well-defined section. A detailed outline shows how to handle each unit in a new and different way. Generous lists of references are appended to each unit study and an extended bibliography is included.

This method of unit teaching makes use of the best features of both the problem and the project methods. In many respects it is a new conception of teaching geography. The book is adapted for use with any textbook or course of study and contains material for about four years in elementary and intermediate grades. It simplifies the work of the teacher of geography and suggests a practical way of organizing the course of study.

Cloth. vi + 250 pages. Price $1.80

WORLD BOOK COMPANY

Yonkers-on-Hudson, New York
2126 Prairie Avenue, Chicago

HARGED

ITM00052413

LB
1027
.H5

18057

Hosic & Chase
Brief Guide tothe Project
Method

T2-CLV-516